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## AMERICAN CYCLES AT THE STANLEY SHOW.

THE first great English cycle show of the season—the Stanley—is over, having been the greatest exhibition of bicycles and "components" witnessed in Agricultural Hall during the twenty years since the first of the series was held. One special particular in which the record was broken was the conspicuous position of the American bicycle. Several of our leading makers had booths so prominently situated and so attractively gotten up as to compel attention. They exhibited their "smartest" looking machines by the dozen and the score; they had wideawake representatives ready to explain everything; and the catalogues distributed liberally were handsomer specimens of printing art than Englishmen have been accustomed to see in connection with the bicycle trade. Besides, the English cycling press has given no small amount of space to the American displays, for all of which reasons it can hardly be denied that the American bicycle is making an impression abroad. More than all, there are the custom-house returns, showing our exports this year of about \$2,500,000 worth of bicycles, the larger share of which has gone to Great Britain, and it must be remembered that in such cases the wholesale, and not the retail prices are given.

No longer can our foreign editorial contemporaries sneer at the mention of an American bicycle. For not only has it been forced upon the attention of visitors to the Stanley show, but it is to be equally conspicuous at the National show. And from this time on it will confront everybody in London and other foreign shop-windows, and in every conceivable form of advertisement, including the best of all advertisements—the practical test of American-made wheels by the horde of American tourists in Europe, next year even more than this.

Nor will the editorial sneer about the ignorance of Americans in the export trade be longer in order. There was a time when some of our manufacturers did consign refrigerators at random to unknown parties in countries where ice is unknown, and files to remote villages where no tools are used. But it is a different thing when hundreds and thousands of high-grade wheels go abroad, in charge of highly-paid selling experts, or consigned to recognized leaders in the trade.

There is a new era in the export trade in America, and the increase in shipments is by no means confined to bicycles. But bicycles may the more appropriately be mentioned here, both because the trade in them has been the latest to be developed on a large scale, and because, as we have more than once pointed out, the success of the American bicycle abroad cannot fail to be the forerunner of an important export trade in American rubber tires.

## MONEY, PRICES, AND WAGES IN BRAZIL.

THE rubber-gatherers of Brazil, where they use any money at all, have gone through all the phases of a depreciated currency standard. As a "Boston rubber-man" writes to the Boston News Bureau:

"The currency of Brazil, owing to lack of gold foundation, has lately depreciated, the value being based wholly on its corresponding value in English money. One milreis to-day is worth but 17½ cents, while at par it is equal to 54 cents in our money, this depreciation having taken place during the past seven years. Labor in Brazil to-day is paid but little more than it was seven years ago, when exchange was at par, while all articles of living have advanced over 300 per cent. Seven years ago a 'gatherer' was paid 150 reis per kilo for cutting, packing and shipping. Now he is paid 200 reis per kilo, while sugar meanwhile has advanced from 400 reis per kilo to 1 milreis per kilo, which is the same of all other necessities of life."

Analysis of the figures quoted by this writer will show that prices of goods have advanced out of all proportion to the prices of labor, and that even with the higher wages (on paper) than were paid on the gold basis, much more labor is now needed to procure a pound of sugar or of flour or a yard of cotton goods.

### HEAVIER EXPORTS OF RUBBER GOODS.

EXPORTS of merchandise classed as India-rubber goods were made from the port of New York during the quarter ending September 30, 1896, as shown by the table below. Their value was larger than for the preceding quarter by \$9007. The signs (+ and -) indicate whether the exports to the various countries have increased or fallen off, compared with the preceding quarter. Usually 60 per cent. of the total exports of rubber goods from the United States are made from New York. The table follows:

| COUNTRIES.                 | Value.    | COUNTRIES.               | Value.     |
|----------------------------|-----------|--------------------------|------------|
| Belgium.....               | \$ 4,088+ | Chile.....               | \$ 673-    |
| France.....                | 10,977+   | Colombia.....            | 1,912-     |
| Germany.....               | 32,388+   | Ecuador.....             | 185-       |
| Holland.....               | 6,482+    | Peru.....                | 1,678+     |
| Italy.....                 | 379-      | Venezuela.....           | 2,936+     |
| Switzerland.....           | 2,668+    | British Africa.....      | 5,070-     |
| United Kingdom.....        | 37,400+   | Other Africa.....        | 166+       |
| Other Europe.....          | 141-      | China.....               | 327-       |
| British North America..... | 433-      | Hong Kong.....           | 3,315+     |
| Mexico.....                | 5,644-    | Japan.....               | 1,978-     |
| Central America.....       | 4,087+    | British East Indies..... | 760+       |
| British Honduras.....      | 54+       | Other Asia.....          | 158+       |
| Cuba and Porto Rico.....   | 4,045-    | Australia.....           | 7,577-     |
| Other West Indies.....     | 1,003-    | New Zealand.....         | 5,285+     |
| Argentina.....             | 677-      |                          |            |
| Brazil.....                | 2,152+    | Total.....               | \$144,637+ |

There were exports of dress-shields during the same period amounting in value to \$33,384, clothes-wringers amounting to \$16,232, and various other classes of goods involving more or less India-rubber. India-rubber thread went out during August to the value of \$5325, and during September amounting to \$3525. There were also shipments of rubber cement and dental supplies.

Exports of unmanufactured India-rubber from the port of New York for the three months ended September 30 were of the declared values given below:

| To—                 | Value.    | To—              | Value.    |
|---------------------|-----------|------------------|-----------|
| Liverpool.....      | \$172,098 | Southampton..... | \$1,285   |
| Manchester.....     | 86,825    | Genoa.....       | 350       |
| Hamburg.....        | 40,233    | Australia.....   | 263       |
| Havre.....          | 36,066    | Belfast.....     | 140       |
| Glasgow.....        | 34,856    | Bremen.....      | 125       |
| London.....         | 16,778    | Venezuela.....   | 112       |
| Rotterdam.....      | 10,796    | Mexico.....      | 97        |
| Japan.....          | 5,754     |                  |           |
| British Africa..... | 1,329     | Total.....       | \$407,106 |

The value of similar exports for the preceding quarter was \$226,223. There were shipments of India-rubber scrap as follows: To Glasgow, \$11,845; Havre, \$8980; Hamburg, \$3258; London, \$1810; Bordeaux, \$1027; Liverpool, \$327; total, \$27,247.

### NOT STIMULATED BY LOWER DUTIES.

RECENT statements from the treasury department at Washington give details of the imports of India-rubber and Gutta-percha goods into the United States for the fiscal year ended June 30 last, compared with the two preceding years. During this period there has been a reduction in the duties on all the classes of goods embraced in the table except on "elasticon" (a substance partaking of the character of India-rubber), but as will be seen below the effect of the reduced duties has not stimulated imports. The new duties took effect during the fiscal year 1894-95, part of the imports in that year having been entered under the "McKinley" and part under the "Wilson" schedules. This will explain why the average of duties was somewhat larger in that year than during the fiscal year 1895-96, under the same tariff law. The values of imports are thus given:

| MANUFACTURES OF—                    | 1894.        | 1895.        | 1896.        |
|-------------------------------------|--------------|--------------|--------------|
| Gutta-percha.....                   | \$ 33,789.25 | \$ 71,964.89 | \$ 82,106.17 |
| India rubber.....                   | 241,967.97   | 200,945.39   | 179,708.18   |
| Hard rubber.....                    | 51,963.43    | 84,400.25    | 87,431.00    |
| Elasticon.....                      | 15,407.00    | 24,972.00    | 24,536.00    |
|                                     | \$143,127.65 | \$391,282.53 | \$373,781.35 |
| Duties.....                         | \$105,685.23 | \$107,465.85 | \$100,695.40 |
| Average duties <i>ad valorem</i> .. | 30.80%       | 27.46%       | 26.94%       |

These figures, by the way, do not include such goods embraced under the cotton, silk, and woolen schedules as may embrace India-rubber as a component material. No separate account can be kept of these.

### MAKING SHOES OF ASBESTOS.

ACCORDING to a local newspaper, Coburn, Fuller & Co., of Milford, Mass., are getting out samples of a new shoe, to be made entirely of asbestos, intended for workmen employed in foundries and smelting-works, instead of the hob-nailed shoes now worn. These are to be manufactured for The H. W. Johns Manufacturing Co. (New York) under the asbestos patents owned by the latter. When interviewed for THE INDIA RUBBER WORLD the president of the company, Mr. Henry W. Johns, said:

"It is true that we are about to begin the manufacture of asbestos shoes for use in smelting-works and the like. These are to be entirely of asbestos, and not of asbestos and India-rubber combined, as was the shoe patented by Mr. Rufus N. Pratt and myself in 1888. We made a good many of those shoes for awhile, though they were never really 'pushed.' Since then we have been making various articles of asbestos for smelters' use—aprons, leggings, face-guards, etc., and sometimes whole suits of clothes—and now the pressure upon us for supplying asbestos shoes has become so great that we have decided to engage in the business in earnest. We have made arrangements with a factory which will be able to turn out 5000 pairs of these shoes per week, or 250,000 pairs per year, and our expectation is that the demand from the beginning will be at the rate of 500,000 pairs a year. We will not have the United States alone, but the whole world, as our market. The leather shoes now worn in smelting-works cost probably \$2.50 per pair, on an average, and wear out in two or three weeks, whereas our asbestos shoes, not costing more money, will wear indefinitely."

Mr. Johns said that these shoes would in no sense come into competition with rubber shoes. Suggestions were sometimes made to him for the manufacture of shoes for other purposes, involving both rubber and asbestos, but his force were too busy to consider the suggestions.

## THE CULTIVATION OF INDIA-RUBBER IN NICARAGUA.

THERE has been a revival of interest in Nicaragua in the future of the India-rubber industry there, due to the decreasing yield and the resulting fear that the methods practiced by the gatherers hitherto will lead to the extinction of the trees. The government has manifested its interest by means of the decree, published lately in THE INDIA RUBBER WORLD, prohibiting the exportation of other than cultivated rubber for the next ten years. This decree was preceded by laws for the encouragement of rubber-planting, and something has been done in this direction. But how far any law can prevent the exportation of native rubber remains to be seen. The United States consul at San Juan del Norte reported recently that, "notwithstanding the law made in Costa Rica some years ago prohibiting the cutting of rubber, much of the rubber shipped from San Juan del Norte comes from Costa Rica. It is estimated that Costa Rica has contributed between 35 and 60 per cent. of all the rubber shipped from San Juan del Norte."

Recently many persons in western Nicaragua—the Pacific-coast section—have declared their intention to plant and cultivate India-rubber in the eastern portion of the republic, investing some of the money which they have accumulated during several years past from their profitable coffee estates. Likewise many requests for information have been received in Nicaragua from citizens of the United States, bearing upon the whole subject of rubber cultivation, the impression evidently existing in many minds that India-rubber is becoming a scarce commodity. These circumstances have led to the preparation of some reports of interest published recently by the department of state, at Washington—one by Thomas O'Hara, the efficient consul at San Juan del Norte, and one by J. Crawfords, of Managua, the author of a paper, included in the volume of special consular reports prepared at the instigation of THE INDIA RUBBER WORLD in 1890, which forms the most valuable contribution to our knowledge of Nicaragua rubber.

Consul O'Hara first calls attention to an extract from the *Bluefields Recorder*, of June 6, 1896, as follows:

"On this subject of agriculture, we may add that a great deal of attention is being given to the cultivation of the India-rubber tree. Several of our banana growers on the river, while cultivating the product of the more rapid growth (the banana), devote some of their time to the India-rubber tree, which has the advantage of being a product full of staying qualities, yielding handsome profits after it has attained its full development, and which has not that baneful influence on the soil which is the peculiarity of the banana. We do not believe that we are beyond the mark when we say that there are to be found on several plantations on the Escondido more than 75,000 rubber plants, vigorous and promising, ready for transplantation. Ten or twelve years after these shall have been planted, bananas will be nowhere; the very places where they are now grown will be exhausted and allowed to lie fallow for the subsequent cultivation of other and less ephemeral products."

The consul has undertaken an inquiry respecting the details of such plantations, and he reports having learned through Vice-Consul Henry E. Low, at Managua, of two rubber plantations in western Nicaragua, with a producing capacity not to exceed 5000 pounds a year. Further information on this head is promised to the department.

Mr. Crawfords writes in his report that localities in Nicaragua south of latitude 15° north and between longitudes 84° 10' and

85° 35', in low valleys where the soil is deep alluvial or deep vegetable humus and sand and capable of being rapidly drained and in a climate that is almost uniformly warm and humid, are best suited to the rubber tree. Many such valleys in central and northeastern Nicaragua supported groves of large-sized trees yielding rubber until about fifteen years ago, when nearly all the trees had been killed by too frequent tapping, or by being cut down by irresponsible collectors. There are, by the way, several species of rubber trees in Nicaragua, some of which are indigenous to a higher, dryer climate and soil. Mr. Crawfords uses the term "elastic rubber" throughout his report, because some varieties, as the "tuno," for instance, are but slightly elastic.

Next to the *Castilloa elastica*, "the second best rubber-producers, in quality and quantity, are of the *Ficus* family, a variety locally known as 'matapala,' an epiphyte having numerous bodies from aerial roots (like the banyan tree). It is also an inhabitant of low, fertile, well-drained lands. By cultivation, this tree would, most probably, fully equal the other low-valley varieties in quality and annual output of rubber. It has the advantage that if one of its trunks or bodies is deadened by excessive bleeding or drainage of the sap, it has several other live trunks from which to obtain supplies of rubber." Evidently the tree thus described by Mr. Crawfords is not unlike the rubber tree of Assam and Burma.

"The quantity of the annual yield of elastic material depends," says Mr. Crawfords, "the soil and climate being suitable, on the bulk of the bast or lactiferous tissues that exist or that can be developed in the tree or vine. Some trees of two to three feet diameter and thirty-five to fifty feet tall will give annually twenty to forty pounds of good rubber. The quality of the rubber depends largely upon the shape or form of the cells and spaces composing the bast, or lactiferous tissue, and in part in the process used to separate the elastic material from the emulsion-like sap. Quality and quantity, therefore, are responsive to cultivation—to be increased or decreased."

Cultivation begins with sowing the seeds in beds and transplanting to a nursery at the end of the first year, and to the permanent plantation at two and a half or three years. The planting is at such distances apart as to allow sixty-four "matapala" or 100 *Castilloa* trees to the acre. "Cultivation consists in ditching the land so as to drain it slowly or rapidly at will, keeping it moist without permitting water to stand in pools or low places. During the rainy season, drain rapidly. Keep all undergrowth cut down and the land 'hilled up' around the trees in cone shape to about six inches higher than the general level within five feet of each tree. Deadened or fell other varieties of trees and vines until they shade but a very small part of the surface of the land."

Tapping may begin during the sixth or seventh year of the tree's age. If the tree has matured properly it should yield from eight to twelve pounds of rubber every second year until it is twelve years old, after which ten to fifteen pounds of rubber should be obtained annually. "The coagulation of the milk and the separation from it of the elastic material can be effected by heating to 167° to 175° F. and stirring in a hot decoction or hot, strong tea of the leaves and twigs from some species of *Convolvulaceae*—as morning glory or bindweed, or, stirring into the emulsion, when fresh and hot, the smoke from burning palm-nuts or other oleaginous nuts—all of which are abundant in districts where the rubber trees grow."



Secondary crops which may be grown profitably between the rows of rubber trees until they reach a productive age are Liberian coffee and bananas, the latter of which would afford a large percentage of the food required by all the animals on the estate.

As for profits, Mr. Crawfords estimates that sixty-four trees to an acre, at nine years of age and thereafter, should yield an average of ten pounds of rubber, or 640 pounds to the acre. At 30 cents net per pound, this would yield \$192 per acre, which should give considerable profit, the cost of cultivation being so slight. The net profit from an acre of coffee trees in Nicaragua is given at \$65.

Consul O'Hara's attempt to compile statistics of the production of India-rubber in Nicaragua has not been entirely successful. For example, the customs records at San Juan del Norte extend back only to 1874, and the invoices on file since that date do not, for most of the years, specify the quantities of India-rubber shipped, but only the values. He is now trying to collect the figures for the other ports, but even if these can be obtained, it will be impossible to say how much of the total represented the product of neighboring states.

THE INDIA RUBBER WORLD happens to have at hand the details of Central American rubber imported by Great Britain and the United States for the years 1870 to 1885, inclusive, the greater part of which was the product of Nicaragua. The larger share was taken by Great Britain, until 1878, when the United States took the lead in the importation of Nicaragua rubber, which it has since maintained.

|                                 | Pounds.    |
|---------------------------------|------------|
| Taken by Great Britain.....     | 6,654,780  |
| Taken by the United States..... | 13,789,499 |
| Total for sixteen years.....    | 20,444,279 |

This without doubt practically embraces the whole production of Central American rubber for the years named, though a small amount may have gone direct to Germany. More than half this rubber was exported during the last four years (1882-85), and by far the greater part of this half was taken by the United States.

Nicaragua rubber then began to be entered separately in the United States customs returns, and the imports from that country alone have since been as follows, by fiscal years ending June 30:

| YEAR.           | Pounds.   | YEAR.           | Pounds.   |
|-----------------|-----------|-----------------|-----------|
| In 1885-86..... | 1,552,574 | In 1890-91..... | 1,146,727 |
| In 1886-87..... | 1,575,837 | In 1891-92..... | 1,027,232 |
| In 1887-88..... | 1,545,121 | In 1892-93..... | 958,703   |
| In 1888-89..... | 1,573,331 | In 1893-94..... | 892,908   |
| In 1889-90..... | 1,209,730 | In 1894-95..... | 907,243   |

Meanwhile Great Britain has begun to record imports from Nicaragua separately, with this result, for calendar years: In 1892-7952 pounds; in 1893-37,072 pounds; in 1894-75,936 pounds; in 1895-33,264 pounds. There have also been unimportant shipments from Nicaragua to France, Germany, and Holland.

Just what has been the rate of decline in the output of Nicaragua rubber can only be conjectured, but that it has been great is proved by the following table showing the receipts of all Central American rubbers by the two great importing countries:

|              | United States [a]. | Great Britain [b]. | Total Pounds. |
|--------------|--------------------|--------------------|---------------|
| In 1885..... | 2,079,278          | 237,552            | 2,316,830     |
| In 1895..... | 1,300,802          | 33,264             | 1,334,066     |
| Decrease.... | 778,476            | 204,288            | 982,764       |

[a, fiscal year; b, calendar year.]

Nicaragua has not so long been a producer of India-rubber

as many other countries. Its output suddenly more than doubled about 1880, continued at the figure then reached for a few years, and then began to decline at a rate which justifies the fears of the trade and the government that without protective measures the rubber tree will soon disappear from Nicaragua.

### THE PRICE OF RUBBER IN NICARAUGA.

IN an official report dated at San Juan del Norte on August 5, United States Consul O'Hara writes:

"The last shipment of scrap rubber was made from here on August 1. The rubber was invoiced at 40 cents. According to THE INDIA RUBBER WORLD of July 10, Nicaragua scrap rubber was worth at that time in New York from 46 to 46½ cents. Between 1874 and 1894 rubber shipped from San Juan del Norte was invoiced at from 15 to 70 cents (United States) per pound. In 1895, it was invoiced at from 41¼ to 53 cents per pound, and has been invoiced this year at from 38¼ to 52 cents. . . . The merchants claim that they make but little profit on the rubber they handle, and that they purchased it to be shipped in exchange for their foreign goods."

### A VERY NEAT SPECIALTY PLANT.

THE New York Vulcanite Rubber Works is the name of a concern that has an exceptionally well-equipped plant at 216-218 Wooster street, New York, the business being under the management of Mr. A. C. Squires. The special business done there is the manufacture of dental rubber in various colors, a high grade of dress-shields, and specialties in mold work. The factory equipment for this work is particularly to be commended. The machines for preparing the dental rubber, for forming and vapor-curing the dress-shields, for hammering and cutting elastic bands, and for the finest specialty work have almost all been particularly designed for this factory under the personal supervision of Mr. Squires. By the way, so well has this work been done that in the line of band aprons alone Mr. Squires has worked up quite a trade in manufacturing them for other makers of elastic bands. It is not the design of the company to go into general work to any great extent, their idea being to seek high-grade specialties, upon which ordinary manufacturers hesitate to put much time and to make the finest grades of goods.

### HOW RUBBER WAS DISCOVERED IN LAGOS.

ON the invitation of the African trade section of the Liverpool chamber of commerce, Sir Gilbert Carter, governor of Lagos (who was then in England for his health), recently visited Liverpool and held an informal conference with members of the section. Mr. Joseph Hoult presided, and said great credit was due to Sir Gilbert for originating and fostering the rubber trade, which in two or three years had risen in value from *nil* to above £250,000. In his reply, Sir Gilbert referred to the curious history of the rubber trade. It appeared that a political prisoner from the Gold Coast was a most intelligent native, who Sir Gilbert discovered was thoroughly conversant with the rubber industry. This man, at the governor's suggestion, procured experts from among his own countrymen who went into the interior and found a wealth of valuable rubber. The industry was at once fostered, and had now attained most respectable proportions. Virgin forests of rubber abounded, especially to the east, from which the supply might be considerably increased.



## THE TIRE INDUSTRY AT HOME AND ABROAD.

SINCE our last issue the Rubber Tire Association have resolved to amend their guarantee to make it correspond more nearly with that adopted by the Board of Trade of Cycle Manufacturers. The form originally adopted will be found in the October INDIA RUBBER WORLD, on page 18. The new form follows:

## 1897 GUARANTEE.

We agree with the purchaser of each tire to make good by repair or replacement when delivered to us, transportation prepaid, any imperfection or defect in material or manufacture of such tire, not caused by misuse or neglect, provided such tire is accompanied by a signed statement from the owner, giving the date on which the tire was purchased by him, together with the name and number of the wheel on which it was used, and that all imperfect or defective tires shall be referred to us, before any claim for repairs or replacement shall be allowed.

We agree to repair, free of charge, any tire that can be repaired, provided such tire is delivered to us, transportation prepaid.

This guarantee continues for six months from the date of the sale by the agent, but expires in any event on May 1, 1898.

This agreement does not apply to tires into which any so-called anti-leak preparation has been introduced

\* \* \*

MORGAN & WRIGHT have won three suits brought by them to test the validity of certain patents covering the essential points of their bicycle tires. The B. F. Goodrich Co. were selected as defendants because of the size and importance in the trade of their business. The litigation lasted three years, during which volumes of testimony was taken, and the final decrees were handed down on October 15 in the United States circuit court in the northern district of Ohio. The suits were brought (1) on all claims of patent No. 490,035, covering the process of making Morgan & Wright tire sheath on a mandril; (2) on the first, second, third, fourth, fifth, sixth, and seventh claims of patent No. 502,047, covering two different features, the inside tube having flattened ends and the process of making the same; secondly, the feature of the ends of the inside tube overlapping each other; and (3) on the fourth, sixth, and eighth claims of patent No. 502,048, covering, firstly, a normally-flattened air-tube in a sheath which has a limited opening; and, secondly, the flattened tube having closed flattened ends. Every one of the claims which the Goodrich company were alleged to infringe was allowed. The decrees did not assess damages, but granted a perpetual injunction restraining the defendants from manufacturing the tires. The damages in the case were adjusted between the two firms out of court. These cases are of far-reaching interest in the trade.

\* \* \*

THE persistent rumors of a deal whereby the Morgan & Wright tire business was to be turned over to a syndicate for \$10,000,000 gained an impetus from the recent sailing of Frank W. Morgan and William Herrick for England. Meanwhile the company have issued this statement: "We wish to say to our friends that we have no intention of going out of the tire business. We will continue to manufacture 'good' tires at the old stand, taking care of our customers as heretofore, and hope to do so for many years to come." It is also given out that the visit of these gentlemen to Europe is to put the sale of their goods abroad on a better basis. It seems to be true, however, that a big tire deal to take over the Morgan & Wright business has been the subject of discussion in certain quarters.

\* \* \*

AMERICAN bicycles are to be much in evidence at the Lon-

don cycle shows this winter. For the Stanley show, held November 20-28, the entries included, according to *The Wheel* (New York), 20 Columbia wheels, 20 Fowlers, 30 Envoys, 20 Stearns, 20 Crescents, and 20 Dayton. At the National show, on December 4-12 there were to be shown 30 Monarchs, 30 Waverleys, 30 Ramblers, a lot of Spaldings, and some of the entries from the Stanley show. It is noted that some of the wheels are to be built upon English lines. By the way, those who have seen THE INDIA RUBBER WORLD'S statistics of American bicycle exports may be interested in learning that the government reports the shipment of bicycles and bicycle-parts during the first eight months of 1896 amounting to \$2,449,260. While these figures make a fine showing, it is possible that a large number of bicycles and tires have gone abroad on consignment, which is a different thing from sales to the same amount.

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FOR some time past a few American bicycle-makers have been exporting to Great Britain machines fitted with Dunlop tires manufactured in this country, but a pointed protest has been made against this by the Dunlop Pneumatic Tyre Co., Limited. The latter have issued a circular stating that, as the American Dunlop tires are not manufactured under British patents, all vendors, purchasers, or users of them in Great Britain will be proceeded against as infringers. The British concern calls upon agents to report to them how many American Dunlop tires have been sold in the kingdom, in order that a royalty of 12s. 6d. per pair may be charged. The circular sets forth that "the materials employed, though quite suitable for American roads, are altogether unsuitable for English roads," and that, therefore, the English company cannot guarantee the tires manufactured here. The American Dunlop Tire Co. announce that this is a matter beyond their control. They say: "We should be very pleased to have our customers send Dunlop tires wherever they wish, but we cannot give them the right to sell it in countries where it is patented."

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BICYCLE-TIRE history in England nowadays is being made in the courts and on the stock-exchange to a much greater extent than in the rubber-factories. All sorts of suits have been brought by dissatisfied parties to the great Dunlop deal, and there has been an avalanche of patent suits. For instance, Harvey du Cros, chairman of the old Dunlop tire company, and Hooley and Rucker, promoters of the \$15,000,000 syndicate, have been sued by George Henry Dodgson and others, stockholders in the old concern, for an accounting of the difference between £3,000,000 paid for the Dunlop interests and the subsequent issue of £5,000,000 capital by the Dunlop Pneumatic Tyre Co., Limited. The defendants have accepted service of the writ. By the way, John B. Dunlop, the inventor, who sold his last 2000 original £1 shares in the old Dunlop company for \$70,000—or £7 per share—on the day on which the \$15,000,000 sale was agreed on, has sued Dr. F. F. MacCabe, the purchaser of his shares, for the difference between \$70,000 and the price to which the shares afterwards rose, on the ground that he was induced to sell while in ignorance of facts which had been communicated by the management of the company to MacCabe.

During the past month Ernst Terah Hooley was suspected of trying to corner the Dunlop deferred shares, which were known to have been largely oversold. It was recalled that in a former

deal in Humber Portuguese, Limited, he squeezed members of the London stock exchange to the extent of £14 for every unsold £1 share, most of which he was supposed to have gotten at £2 each. Upon hearing to what extent Dunlop deferred shares had been oversold, the stock exchange governing committee adopted regulations in the interest of buyers, which foiled the purposes of Mr. Hooley's syndicate, if, indeed, it entertained any purpose to get up a "corner" and "squeeze" its victims heavily.

As illustrating how the big tire promoters are making money without first making tires, it is stated that, as a result of fortunate investments, and the sale of the Dunlop interests in France, the Dunlop Pneumatic Tyre Co., Limited, have been able to wipe out half of their £1,000,000 debentures, thus setting free \$100,000 in interest, to be converted into dividends. But this is not the only type of financial manipulation which has lately been indulged in. The public nowadays seem to have implicit faith in any tire company that can manufacture under a Dunlop license, which has opened a wide field in the revivifying of moribund concerns which happen to have such a license, but no other assets. These licenses, by the way, may have been forced upon the companies, under the old Dunlop régime. The operation includes the purchase of shares as cheaply as possible—say 6d. for a £1 share—and a settlement with the creditors, after which there is a meeting of stockholders, a small subscription of fresh capital, a show of resumption of work, and the working up of the shares at a premium on the face value. Doubtless the purpose of promoters of this class is to sell back their licenses to the Dunlop company at a handsome profit.

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THE Dunlop Pneumatic Tyre Co., Limited, have brought suit against the manufacturers of the Fleuss tubeless tire, on the ground that it infringes the English "Clincher" patent, which is now owned by the Dunlop company, as regards the fastening to the rim. In case the Fleuss patent should be sustained, it is regarded as inevitable that the Dunlop people must buy it, while, should the other side win, the tubeless tire would probably be made under one of the licenses granted under the "Clincher" patents. In the Fleuss tire there is no air-tube, properly speaking, but only a cover, or outer tube, rendered capable of containing and holding compressed air. It is predicted that there will be a legal contest of long duration and of great interest on this point.

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IN an article on "The Cycling Industry" the London *Times* has this to say: "As to tires, there is a vast output in Birmingham. During the present season the pneumatic tire has been turned out at the rate of about 1,500,000 a year, and a very large proportion of this trade is centered in Birmingham. . . . The output for the British trade at the present rate of production may be stated at about 750,000 cycles per annum, which may be roughly valued at between £11,000,000 and £12,000,000."

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THE Gormully & Jeffery Manufacturing Co. (Chicago) have lodged a notice of appeal against the recent decision by Mr. Justice North, in the suit brought by the North British Rubber Co., Limited (Edinburgh), for alleged infringement of the "Clincher" tire-patents, at the factory of the defendant corporation at Coventry, England.

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THE suit of the American Dunlop Tire Co. against the Anderson Tire Co. of Canada, has been decided in favor of the Dunlop company with costs, and the counter suit of the Anderson against the Dunlop company has been dismissed without costs, confirming the validity of the Dunlop patents in Canada.

ONE of the English tire companies spells its name in the current American fashion, and in its advertisements gives this reason: "Numerous correspondents have asked us why we spell *tire* with an *i*. Our answer is—refer to any standard dictionary and you will find something like the following: '*Tyre*—An absurd way of spelling *tire*.'" The concern mentioned is the Turner Pneumatic Tire Co., Limited, who are licensed under the Dunlop-Welch patents.

## CHEWING-GUM BY THE THOUSAND TONS.

OCTOBER was the beginning of a new crop season in the Chicle trade and was marked by arrivals in good volume, though the conditions of the trade are such that no trustworthy predictions can ever be made of the probable production. For some time past the shipments from Mexico have been on an increasing scale, attributable no doubt to the comparatively high prices which ruled early last year. There were fluctuations afterward, the present year opening with the market at 32 cents per pound. During the spring there was an advance to 35@36 cents, followed by a decline to 22 cents, which is the prevailing quotation at this time. Some sales were made at New York in October as low as 20 cents. It is not impossible that this decline, if long continued, may lessen the output of Chicle from Mexico, and the prospects for a rise are not favorable in view of stocks held here amounting to some 800,000 pounds. Every year a larger extent of forests is worked for Chicle, resulting in a steady growth of the production since the gum first became an important commercial article, about ten years ago. Prior to that time 7 or 8 cents a pound was considered a good price. The importation into the United States constitutes almost the entire production, and the amounts and values are thus officially reported from Washington, for fiscal years ending June 30:

|                              | 1894-95.   | 1895-96.    |
|------------------------------|------------|-------------|
| Chicle imports—pounds.....   | 1,903,655  | 3,618,483   |
| Value.....                   | \$ 490,438 | \$1,167,101 |
| Average value per pound..... | 25½ cents. | 32 cents.   |

It was practically after the close of the last fiscal year that the price fell to the figures now prevailing.

The authorities at Mexico have obligingly compiled for THE INDIA RUBBER WORLD the following statement, from official sources, of the exports of Chicle from the republic for the past years, together with the values in Mexican silver. This is the first time that such a statement has appeared in print:

| YEAR.           | Pounds.    | Value.      |
|-----------------|------------|-------------|
| In 1885-86..... | 929,959    | \$156,402   |
| In 1886-87..... | 1,254,853  | 353,641     |
| In 1887-88..... | 1,542,794  | 371,673     |
| In 1888-89..... | 2,037,783  | 592,810     |
| In 1889-90..... | 1,827,131  | 714,242     |
| In 1890-91..... | 2,457,653  | 1,284,682   |
| In 1891-92..... | 2,494,177  | 703,572     |
| In 1892-93..... | 1,757,813  | 705,169     |
| In 1893-94..... | 2,645,722  | 803,017     |
| In 1894-95..... | 1,668,636  | 679,367     |
| In 1895-96..... | 3,297,371  | 1,527,838   |
| Total.....      | 21,913,932 | \$7,892,413 |

Not quite all this amount came to the United States, according to the Mexican *secretaría de hacienda*, and yet the total production reported in Mexico does not equal the imports reported at Washington, which suggests that some of the Chicle arriving here must be gathered elsewhere than in Mexico. The Mexican product, by the way, was shipped from the ports of Campeche, Coatzacoalcas, Frontera, Isla del Carmen, Manzanillo, Progreso, Salina Cruz, San Blas, Tampico, Tuxpan, and Vera Cruz.

## THE INDIA-RUBBER INDUSTRY IN EUROPE.

RUSSIA ranks third among the rubber-manufacturing countries of the world, measured by her consumption of the crude gum, being surpassed only by the United States and Great Britain. The rubber industry in that country dates back nearly to 1830, or as early as any other country in continental Europe had a rubber factory. The great Russian-American India-Rubber Manufacturing Co. have been in existence at St. Petersburg since 1860, leading the trade in the production not only of goloshes, but of a great variety of other goods produced in that country. Goloshes are mentioned first, because nowhere else are they so essential to the comfort of millions of people as in the land of the Czars. The official figures which follow have been supplied to THE INDIA RUBBER WORLD through the courtesy of M. de Routkowsky, agent in America for the Russian ministry of finance. The first table shows the quantity and value of crude India-rubber imported by Russia for five years past:

| YEARS.              | Pounds.    | Value.      |
|---------------------|------------|-------------|
| In 1891.....        | 9,674,800  | \$1,974,000 |
| In 1892.....        | 9,410,400  | 2,401,000   |
| In 1893.....        | 10,038,100 | 3,222,000   |
| In 1894.....        | 14,259,500 | 4,080,000   |
| In 1895.....        | 12,165,700 | 3,600,000   |
| Yearly average..... | 11,109,700 | \$3,055,400 |

It will be noticed that the valuation given here is very low, the average for the five years being only 27½ cents per pound. In the year showing the highest valuation the average did not exceed 32 cents. It is plain, not only that a good deal of rubber of low grades is consumed in Russia, but that these figures must embrace reclaimed rubber. The Russian customs department makes no return of exports of rubber, from which, and from other indications, it is to be inferred that all the rubber imports into that country are for home consumption.

Some additional figures supplied by M. de Routkowsky relate to the exports of India-rubber manufactures from Russia, also shown by years, as follows:

| YEARS.       | Value.     | YEARS.       | Value.     |
|--------------|------------|--------------|------------|
| In 1891..... | \$ 637,000 | In 1894..... | \$ 876,000 |
| In 1892..... | 843,000    | In 1895..... | 1,317,000  |
| In 1893..... | 1,131,000  | Average..... | 960,800    |

The imports of rubber manufactures into Russia are very small, and no statement of their value is obtainable. One fact which may be noted here, from a different source, is that the shipments of crude rubber from England to Russia, for the five years mentioned above, have averaged 3,994,076 pounds per year.

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TRADE CONDITIONS IN GERMANY.

THE Association of German Rubber-Goods Manufacturers has issued a circular to its members suggesting their coöperation in a movement originated by the chamber of commerce of Crefeld, with a view to improving German trade with eastern Asia. It is proposed to follow the example of the Lyons chamber of commerce and send a delegation to China and Japan, to see what additional demand for goods can be created in those countries, and also what Oriental wares can be disposed of most advantageously in the markets of Europe. It is believed that it will be to the advantage of the German rubber trade to make an effort to extend its field in the far east.

Respecting the manufacture of telegraph-wire and electric cables the annual report of the chamber of commerce of Frankfurt o/M. says, in substance: "This comparatively new industry

gains ground from year to year and embraces constantly new fields, so that its various branches are continually employed. It is to be regretted that the prices of raw material have risen and the sales prices fallen to such an extent, that the rentability of a business requiring such accuracy in manufacture and such careful selection of material is a matter of doubt. Although the main factor, copper, has advanced on the English exchanges, the advance placed on copper wire by the manufacturers is out of all proportion, made possible only by a convention. Rubber and cotton, which enter largely into the manufacture of these goods, have also advanced considerably, so that the cost of production is materially higher than formerly. It is true that in August, 1895, an advance was made in prices, but through strong competition this has crumbled away, so that at the time of this report the position is exactly the same as before the advance. This industry has been much simplified by the establishment of uniform diameters and insulations."

The annual report of the chamber of trade and commerce of Dresden, for the year 1895, has this to say on rubber goods: "In the Saxony-Bohemia Rubber-Goods Factories Stock Co., at Dresden and Bünauburg (Bohemia), notable advances were made in the sale of goods, but at reduced prices, particularly in bicycle goods, while the prices of raw material advanced. Exports to England decreased notably on account of the unprofitable prices of rubber balls, but new and satisfactory connections were made with Russia, Italy, and Roumania. Payments by purchasers have been very unsatisfactory. In Germany the ball industry is at zero, but their export to Austria is a paying one. The Bünauburg factory closed its yearly balance sheet with a deficit, reducing the profits of the company for the year."

One Dresden factory reports that the business situation has not improved, as a large proportion of the dealers care more for low prices than for quality of goods, and this has determined the course of a majority of the smaller factories. The transactions of this factory, however, were equal to that of last year. The report of another factory states that in the past few months a change for the better has been manifested. The result was better than that of the former year. Although the price of fine Pará rubber during the last three months was advanced 15 per cent., there was no rise in the price of the manufactured goods, on account of the "abominable" competition. Manufacturers of mechanical goods contemplate an advance for the end of the year. The export trade has remained dull, Austria being a buyer. The export trade to Russia was hampered by the high tariff, and the uncertainty of collections, even in spite of the long time granted. No change occurred in the Gutta-percha industry.

\* \* \*  
THEY USE RECLAIMED RUBBER.

THERE is not a rubber-manufacturing firm in Great Britain, who know their business, but what use large quantities of reclaimed rubber, and find it very advantageous to do so, says *The India-Rubber Journal*. "In mechanicals it can, for certain grades, be used without any crude rubber being added at all, and for proofing it is perfectly safe in the proportion of 4 to 1, if a good quality of the 1 is used as a foundation. Why rubbermen persist in saying they never use it we know not, but their assertion we know to be all humbug."

\* \* \*  
RUBBER-TIRED COACHES A FAILURE.

WITH regret [says *Die Gummi-Zeitung*] we note that the



rubber-tired vehicles which were placed in service in Berlin during the spring have all disappeared. They were withdrawn gradually until only five remained, and these, with the other nineteen formerly withdrawn, were recently sold at public auction. These elegant and expensive coaches did not seem to receive the patronage of the public sufficiently to pay expenses, although the rates were uniform with other and less comfortable vehicles. Whatever the cause of their failure may be,—whether too much competition, lack of capital, or the well-paved streets of Berlin, which perhaps may have made rubber-tired wheels seem unnecessary,—it certainly is a loss to the rubber industry, and we hope that this endeavor will soon be repeated with better success.

#### PARISIAN NOVELTIES IN MACKINTOSH CLOAKS.\*

THE perfection in which mackintosh cloaks are made nowadays, when they are entirely odorless, light, and in fact porous,—which refutes the assertions so often heard of their being detrimental to health,—gives us an idea that overcoats and capes are not the only garments within the possibility of manufacture in this branch. Indeed we have lately seen complete suits adapted equally well for travel and for sporting wear.

For gentlemen especially there are three kinds of note: a rubber-mixed woolen fabric, a light glossy rubber cloth, and a double texture with rubber insertion. Even caps are made from these goods, to match the suits. The styles for travel and for sport are almost similar, except in the trousers, which are worn by bicyclists short, to the knee, puffy, and fastened below the knee by an elastic band. The short loose jacket or blouse is trimmed in the back with velvet. The front has on each side three pockets, stitched on—two large ones with flaps fastened by a button, and a small one between them, which is open and cut into the cloth. The large pockets are not exactly one over the other. Brown or dark blue chevrons seem to have the preference for the suits, also diagonally-ribbed goods and plaids, large and small—suited the English taste—of a rough woolly facing. Stitched edges are worn more than binding, which seems no longer in fashion. Most coats are six-button single-breasted.

Clothed in a costume of this kind the heavens cannot harm one, even if all the sluices should be opened, and they therefore seem to have a promising future, especially for extended tours. Each bicyclist takes as a precaution against the cold a short loose cape, with a pointed hood, preferably of a black glossy rubber cloth, with a heavy lining of plaid.

The long overcoat is reserved for tourists and business men whose avocations call them out in stormy weather; it would only be an incumbrance to the bicyclist. Of late it has been worn shorter, and the principal requirement is plainness—in fact, the plainer the better. The style is sack-shaped and rather full, the back without seam, the hood in folds. Still more stylish is the ulster of glossy cloth, with black cassimere or colored plaid lining; striped and in small checks it would be considered English. The long smooth cape with small hood over it is detached under the wide collar, which is of even width all around and turned down. On some styles they are fastened on two pleats with large buttons, ornamented over the breast, with sleeve ornamentations to match. Where more attention is paid to the practical than to the elegant, several large pockets are made on each side of the coat, and between them a smaller pocket, cut oblique and open; otherwise, smaller pockets, one on each side, within reach of the hand, are sufficient.

\* Translated from *Die Gummi-Zeitung* (Dresden), October 2.

Beautiful stuffs have been manufactured, luster-faced, or a reminder of a fine smooth wool stuff, which is used in the well-known dust-coats. To carry out the style it is intended to make them very full, with long capes.

To permanently place the mackintosh coat on an equality with other garments it should differ (excepting in its interior arrangement) as little as possible from them in cut, style, and finish. With the merits which it possesses over others in this age of sport and travel, this goal ought to be reached easily. The only thing in which single and double texture garments have been lacking hitherto is elegance, which they have now acquired, not only in the fabric, to which a beautiful appearance has been imparted, but also in the manifold ornamentation in the way of flaps, buttons, and facings.

For ladies' wear we have a few patterns which seem to receive preference—the styles "Ivonne," "Clamart," and *mante luchonnaise*, which, in addition to being beautiful and graceful, possess in the eyes of the Parisienne the enormous advantage of being "new." Cloaks with rough surfaces are less in favor than those of "Silesienne caoutschoute," or of silk. The foundation for "Ivonne" and "Clamart" is a style of redingote, which style is much admired. The first of these, which is in stripes, presents a pleasing appearance, the waist having one ruffle and the neck four, in shape of an empiecement; the puffs at the shoulder created thereby being hidden by two long pleats ending at the seam, where they are caught into the very full lower part of the cloak. A broad shawl-like velvet collar with elongations of the breadth of a hand, reaching in front to the waist, belongs to this. In contrast to this loose and easy style is the "Clamart," which is of tight fit and accurate or scanty cut, but in order to accommodate the skirt two ample folds are cut at the waist on the revers. The jointing of the loose pleats falling over the shoulders, as in the first-named style, are covered by a short-creased overpelerine, with high-flaring top like a Medici collar. The mantle is so long as to entirely cover the seam of the dress.

The *mante luchonnaise*, cut entirely in wheel shape with a very loose circular hood, enjoys the reputation of being the most comfortable among the newer cloaks. It is richly ornamented with velvet in pleats and loops, but of course, on account of its cut, is devoid of the principal ornamentation of the others—the garnishing of the buttons. It is mentioned that the Princess style of mantles,—those without any form of collar,—is to be revived, but if this should be done it is not to be expected before next spring. As long as balloon sleeves are in fashion it is entirely out of the question, as they could not be used in combination. In some patterns the sleeves are slit from the shoulder to the elbow; these, of course, are covered by a cape.

The principal requisite in a ladies' mackintosh is that the part covering the skirt is cut sufficiently full to accommodate the abundant material used in the modern styles.

#### OIL-PROOF TUBING AND HOSE.

A PROBLEM of exceeding interest to the rubber trade appears to have been solved after many experiments by a German inventor in India-rubber. This is nothing less than to make hose and tubing that is absolutely unaffected by petroleum, tar oil, and similar fluids, and further than this that is absolutely gas-tight. This new method is now being made the subject of letters patent in nearly every civilized country. The inventor is Mr. F. X. Servatius, of Cologne-on-the-Rhine, Germany, to whom we are indebted for the information, and who is prepared to furnish full particulars to parties interested.

## BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

**P**ATENTS for the last month show nothing of remarkable interest in the various rubber lines. In the tire department for example there is a flexible band for stretching around the outside of a tire for repairing purposes and a patching device, two repairing tools and an implement for replacing inner tubes. As for tire patents there are two of the cushion variety, two straight pneumatics, one sponge rubber tire and an endless tubular fabric, designed to be used in tires.

In boots and shoes, an inventor in the west produces a novelty in footwear made up of a rubber upper with a leather insole projecting to form a guard for the upper, and further to allow it to be nailed through to the outer sole. Another patent is an elastic shoe-stay, while Marcena St. John of Ottawa, Kans., tries to solve the overshoe fastener problem.

In mechanical goods a Boston inventor produces a hose nozzle, while one in Cleveland brings out a new type of lawn sprinkler. In notions the I. B. Kleinert Co., N. Y., become the assignees of a new dress shield which has an ingenious arrangement for fastening to the dress. In druggists' sundries there is a syringe patented by an inventor in Atlanta, Ga., while a new style of waterproof clothing is patented by a Connecticut man. Under the heading miscellaneous F. W. Hahn, who is a well-known horseman, patents still another idea in rubber-cushioned horse-shoes. The lesser inventions under this heading are an inflated bicycle saddle, an inflated billiard cushion, a neck protector (perhaps for those who are likely to get it in the neck), and an inflatable mattress.

Among the Trade-Marks, those that are notable are one secured by the Hartford Rubber Works Co., one by the Boston Woven Hose & Rubber Co., covering the word "Vimoid," and the L. C. Chase Co. trade-mark the word Chase in connection with pneumatic tires. The only design patent is one by H. F. Neumeyer, for one of his well-known lawn sprinklers.

## TIRES.

No. 568,753.—Clamp for Repairing Bicycle Tires. Wm. Foth, Orange, N. J.

A tire-repairing clamp, consisting of a flexible band formed with a graduated series of holes and having one end a strap provided with a series of teeth, and at opposite end a hole to insert the strap and adapted to engage the teeth.

No. 568,794.—Patch for Bicycle-tires. Albert C. Rehbein, Menominee, Mich.

The combination with the outer case or cover of a pneumatic tire, of a patch consisting of a piece of flexible material secured to the inner surface of the tire by means of cement, a layer of which is interposed between the adjacent faces of the tire and patch, the patch being further secured to the tire by spaced rows of stitches extending substantially at right angles to each other, the stitches being passed through both the patch and the tire while the cement is in a plastic condition, whereby the plastic cement is drawn by the thread into and caused to fill the perforations formed by the stitches in such manner as to render both the outer case and patch impervious to air.

No. 568,813.—Tire for Bicycles. Wm. H. Taylor, Narragansett Pier, R. I.

In a bicycle tire the combination of a series of spring-rings a short distance apart, a bar carried inside of the rings and riveted to them, a textile covering for the rings and bar, and short strips of metal placed on the outside of the textile covering, without riveting and held in place by a textile strip cemented over them, to the textile covering.

No. 569,074.—Pneumatic Tire. Geo. W. Weiss, Brooklyn, N. Y.

A pneumatic tire, consisting of an outer flexible sheathing-tube, an inclosed inflatable tube, a cushion located between the

tubes adjacent to the tread of the tire, the cushion being of a substantially semicircular form in cross-section and arranged with its outer curved surface as a support to the sheathing-tube, whereby an air-space is formed between the tubes at each side from a central point at the tread of the tire to the inner side of it opposite the tread, the inflatable tube being of such dimensions in cross section relative to the sheathing tube as to only contact on one side with the cushion and on its opposite side with the sheathing-tube at a central point on its inner sides.

No. 569,403.—Cushion Tire for Vehicles. John R. Boice, Toledo, Ohio.

In a cushion-tire for vehicles, a tube having an inner and an outer portion of a like thickness, the outer portion being of a greater width than the other portion, and sides of a greater thickness connecting the outer and inner portions angled outwardly toward the periphery of the tube and a resilient filling for the interior of the tube.

No. 569,523.—Cushion Tire for Vehicle Wheels. Albert E. Spencer, Brooklyn, N. Y.

In a vehicle wheel the combination of an inner rim having flanges, an outer rim having flanges, a guard with means for binding the parts together and preventing the outer rim from slipping round the inner rim, and springs enclosed within the parts and having their free ends not abutting and adapted to move in a longitudinal direction.

No. 569,566.—Tire for Vehicle Wheels. Charles A. Pratt, Clinton, Mass.

A tire for vehicle wheels consisting of an airtight tube composed of cellular rubber provided with a light core of different substance, having communicating interstices or air-spaces between its component particles, a substantially inelastic inclosing sheath expansively restricted, and a valved nipple affording communication with the interior of the tube, whereby the tube may be inflated and the cellular-rubber body constricted within its normal bounds.

No. 569,757.—Means for closing Punctures in Pneumatic Tires. Edwin G. Hurt and Enoch M. Hostetter, Caldwell, Idaho.

A device for closing or sealing a puncture or hole in a pneumatic tire, consisting of a screw-threaded rod, having a head at one end, and a collar mounted thereon, a disk provided with a central screw-threaded passage through which the rod is adapted to be passed, and an open conical, hollow, flexible attachment which is adapted to be mounted on the rod, adjacent to the head and to be held in position by the collar, and means for operating the parts, consisting of a tubular shaft having a head or handle at one end and provided near its open end with a transverse pin which is adapted to engage with a hook or projection formed on the end of the screw-threaded rod, and the tubular head being provided with a sleeve which is mounted thereon, and provided with shoulders or projections at opposite sides thereof, and with flanges at its end which are adapted to engage with a transverse slot or groove, in the surface of the disk which is mounted on the screw-threaded rod.

No. 570,137.—Endless Tubular Fabric. Geo. C. Moore, Worcester, Mass.

An endless tubular fabric having a succession of continuous courses of threads extending round the circuit of the same, the component threads of a course extending oppositely in zigzag directions and each thread passing only part way around the transverse circumference of the fabric, the component threads of a course interlooping with each other along lines extending longitudinally in the fabric, and each course overlying the preceding courses and gaining only part way around the transverse circumference of the fabric, the thread or threads at the outer periphery of the fabric being of an elastic nature,

No. 570,142.—Implement for replacing inner tubes of Pneumatic Tires. William S. McCutcheon, El Paso, Tex.

In an implement for replacing the inner tubes of pneumatic tires a grip for the end of the inner tube consisting of a tapering plug adapted for connection at its smaller end with a drawing-in cord and the tapering sleeve adapted to fit over the plug and clamp the tube end thereon.

No. 570,185.—Device for Repairing Pneumatic Tires. Levi M. Devore, Freeport, Ill.

A tool for repairing bicycle tires, comprising two shanks, each having a point approximately at right angles to it, the shanks being adapted to be separably connected and thereon to bring the points into position to clasp between them a folded patch, the points when in such relation being adapted to be thrust through the wall of a bicycle tire tool carrying with them the folded patch, and the angle between the points and shanks being adapted to limit the inward movement of the points.

#### BOOTS AND SHOES.

No. 569,125.—Rubber Boot or Shoe. Alfred C. Torbert, Austin, Ill.

As a new article of manufacture, a boot or shoe comprising a rubber upper, a leather insole, and single leather insole, projecting out beyond the front and rear portions of the insole and the upper to form a guard, nails securing the outsole to the insole and a heel coextensive with the rear portion of the outsole and nailed directly thereto.

No. 570,076.—Shoe-stay. Alfred Weigand, Milwaukee, Wis.

A stay of pliable elastic material cut to present a forward portion for insertion well up in a shoe toe, and a plurality of rearwardly diverging arms each of which has independent yield to variable pressure.

No. 570,347.—Overshoe-Fastener. Marsena St. John, Ottawa, Kans.

In a rubber fastener, the combination with an eye member attached to the shoe, and a substantially U-shaped catch member the extremities of whose arms are removably connected with the eye member of and attaching wire, whose center lies against the inner face of the rubber near its upper edge, the ends thereof being then passed over the base of the catch member and carried downward on the outer face of the rubber, thence passing through holes in the latter, and the extremities of this wire being bent upward and resting against the inner side of its central portion.

#### MECHANICAL GOODS.

No. 568,876.—Hose-Nozzle. John W. Regan, Boston, Mass.

In a hose nozzle a pipe having attached to its end a slitted ejector combined with a laterally or radially slitted adjustable cap and a suitable locking or holding device for holding the parts in their proper adjusted positions.

No. 569,213.—Lawn-Sprinkler. Louis H. Sholder, Cleveland, Ohio.

A slidable sprinkler of the variety shown, having a single spraying discharge at its center, a connection for the hose at one side, and a hole opposite the hose connection to attach a cord for the purpose of drawing the sprinkler over the lawn, and a pivoted upwardly-extending spray guard supported on top of the sprinkler, and at one side of the single central spraying-discharge.

#### CLOTHING.

No. 570,081.—Waterproof Garment. Milo D. Leach, Litchfield, Conn., assignor of one-half to Henry J. Hendey, Torrington, Conn.

A waterproof garment having an opening the upper portion of which extends from the front of the neck to a point at one side of the body of the garment, and the lower portion extending from that point down to the bottom of the garment, the edges of the upper portion of the opening being provided with fastening means to hold the upper edge overlapped upon the lower edge, and the edges of the lower portion of the opening being provided with fastening means to hold the front edge overlapped upon the rear edge, whereby water moving downward and rearward is prevented from entering the openings.

#### NOTIONS.

No. 569,590.—Dress-shield. David Basch, New York, N. Y., assignor to the I. B. Kleinert Rubber Company, same place.

A dress-shield having eyelets at the junction of the body and arm-flaps, and other eyelets near the edge of the arm-flap between the first mentioned eyelets and the end of the arm-flap, and provided with elastic straps passing through the eyelets and having an end left free to permit of altering the normal acting length of each of the straps.

#### INSULATION.

No. 568,716.—Insulated Electric Cable. Max Guillaume, Mulheim-on-the-Rhine, Germany.

An electric cable or conductor furnished with insulating material arranged inside and outside alternate convolutions of windings of fibrous material.

#### DRUGGISTS' SUNDRIES.

No. 570,245.—Syringe. Dozier T. Bentley, Atlanta, Ga., assignor of one-third to Edward L. C. Ward, Fulton County, Ga.

A douche consisting of a bulb and a tube leading therefrom, an elastic band adapted to receive the finger secured to near the end of the tube, and a strip passing from the end of the tube backwardly to the band and being perforated at the end of the tube.

#### MISCELLANEOUS.

No. 569,009.—Cushioned Horseshoe. Frederik W. Hahn, New York, N. Y.

A horseshoe having grooves formed by bands, the elevations on one band-calk having a straight front edge; and a web; the web uniting the bands forming the grooves and calk, in combination with an elastic packing.

No. 569,326.—Bicycle-Saddle. Alfred C. Drury and George E. Sims, Canton, N. Y.

A saddle for cycles, comprising a base curving upward toward its rear edge and having the reinforcing strips at its front and rear edges, the front strip being formed with an offset and having a notch therein, a flexible cover extending over the base of the saddle, the padding interposed between the base and cover and terminating short of the front edge of the saddle, and the inflatable tube or sack arranged in advance of the padding and between the base and cover and having its valve-stem arranged in the notch of the front reinforcing-strip.

No. 569,519.—Billiard-table Cushion. Wm. J. Rodd, St. Leonards, New South Wales, assignor to Walter George Henderson, Sydney, New South Wales.

The combination with the rail of a billiard-table, and a backing secured to the rail, of a plurality of inflatable tubes mounted on and connected with the backing, and an air-valve having a terminal common to all the tubes and provided with nipples to which the tubes are attached air-tight at one end, whereby the tubes may be simultaneously inflated.

No. 569,540.—Neck-Protector. Edmund E. Carlton, Cambridge, Mass.

An elastic and waterproof shield or neck-protector, having a circular neck-opening, a radially-slitted portion, non-elastic segmental reinforcing-pieces, secured to the shield about the neck-opening upon each side of the radially slitted portion, and each provided with a plurality of perforations for the reception of a fastening device, and waterproof covering strips secured over the reinforcing pieces.

No. 569,712.—Inflatable Mattress. James W. Hardesty, Montgomery, Ala.

In an inflatable mattress, the combination with the bottom piece formed of a single strip or sheet of rubber or analogous impervious flexible material, and the upper portion formed of a like piece of material with the sides and ends continuous therewith, and stitched and cemented to the bottom piece, a series of rubber disks, stitched and cemented at regular intervals to the inner surfaces of both the bottom and upper portions, loops of cord secured to the disks, the upper series of the loops being much longer than the lower series, and malleable, metallic S-shaped links connecting the upper and lower series of loops.



## NEW GOODS AND SPECIALTIES.

**E**VERY now and then, mackintosh manufactures seem suddenly struck with the idea that their garments should be better ventilated and set their wits to work to accomplish this in various ways. A late European invention consists of making the upper part of the garment adjoining the collar of an open woven unproofed fabric but covered by an overlapping cape of water-proof material. This idea, by the way, has not the merit of novelty in the United States, as goods of this kind have long been manufactured here. It has been patented however by Gotliffe & Bennet, Manchester, England.

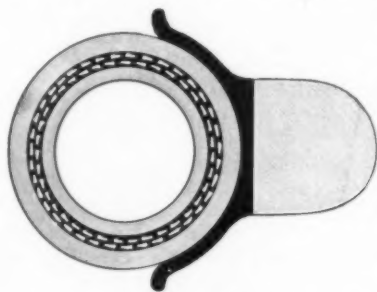
## THE BROOKLYN SINGLE TUBE TIRES.

THESE tires are made by patent inlet methods, perfectly seamless and without a splice which renders them exceptionally strong and reliable. They have been tested by hydraulic pressure and found to withstand 330 pounds to the square inch. They are sold with the guarantee, that unless complete satisfaction is given as to quality, durability and resiliency, the money will be refunded. They are made of the choicest selected Sea Island cotton and old Pará rubber, only skilled workmen being employed to work upon them. The Ideal Repair Kit is furnished with each pair by which the tire may be easily repaired if by too hard usage or unlooked for mishap it should be punctured. These tires are made in two grades, the W. A. Ideal Air Tube and the Brooklyn Tire No. 22, and manufactured by the Ideal Rubber Co., Brooklyn, N. Y.



## THE BATAVIA RUBBER TIRE.

A PNEUMATIC tire for vehicles which is guaranteed to give perfect satisfaction is the "Batavia Rubber Tire." It can be adjusted to old wheels as well as new without the slightest damage to the paint, or marring of any kind. The workmen who adjust it are thoroughly competent to adapt the tire to the load it will be required to carry, and understand perfectly how to give it the required amount of compression so as to get the greatest amount of wear. Old wheels are often sent to the Batavia factory and returned the following day thoroughly equipped with the tire ordered. Manufactured by the Batavia Carriage Wheel Co., Batavia, N. Y.



## A WATERPROOF CYCLE CAPE.

THE illustration shows a neat, light-weight, waterproof cape for protection from the rain when cycling, which can be carried ready for use, without the slightest inconvenience, since it is so constructed as to roll into a small leather case, hardly larger than the tool bag, which can be strapped to the wheel. It is made of the finest fabric in texture, water proofed by a special process, and is most inexpensive, the price, including case, being only \$1.50. The ease with which it may be carried and its thoroughly waterproof qualities recommend it to all cyclists. Manufactured by the Burlington Blanket Co., Burlington, Wis.



BURLINGTON CYCLISTS' RAIN CAPE



## A SKATER'S PNEUMATIC CAP.

A VERY interesting bit of head gear for skaters is a rubber cap which when inflated protects the back of the skull as well as the temples, so that a skater whose heels fly suddenly from under him is not as liable to crack his skull when wearing this cap as if he were without it. It is the invention of R. Kindermann, Schuckenuau, Bohemia.

## THE GLOBE SPRAY FOUNTAIN SYRINGE.

A NEW fountain which is known as Tyrian Ten is shown in the accompanying illustration. The trade are so familiar with the Tyrian goods, particularly in the line of fountain syringes that there is not much to say about this, except with regard



to the globe spray which is new and of decided advantage. This syringe is fitted with the regular number of hard rubber pipes and is put up in a handsome hardwood box. Manufactured by the Tyer Rubber Co., Andover, Mass.

### THE CHASE TOUGH TREAD TIRE.

WE have here presented to the bicycle manufacturers and riders of America a standard road tire, made of the best materials, which will not slip, is light and elastic and practically non-puncturable. Remembering that it is quite possible to slip on glass but not on sandpaper it is patent that a rough tread tire cannot be made to slip by contact with mud or sand. It will ride with no loss of speed and with perfect safety over



wet macadam or asphalt. Unlike the molded tires the Chase Tough Tread is cured slowly in open heat which process the manufacturers claim saves over 30 per cent. of the life and vitality of the rubber. They also vouch for the genuineness of the material and skillful labor which is represented in their tire. Manufactured by L. C. Chase & Co., 129 Washington street, Boston.

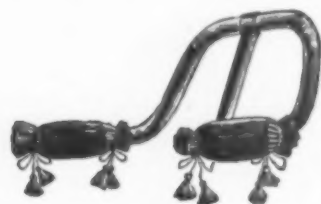
### THE STERLING GRADUATE.



SEVEN out of ten graduates break at the base and are thereby rendered useless for all practical purposes. The makers of the Sterling Graduate, realizing this, proceeded to make an unbreakable hard rubber base which prevents a long line of accidents and furthermore provides a means to hold a "screw graduate." In other words the base and upper are detachable, and since the former cannot break it and the latter rarely breaks there is a decided economy in this new appliance. Manufactured by Neidlinger Bros., New York.

### COVERS FOR CORK HANDLES.

THE examination of a wheel by a possible purchaser often involves the rubbing and soiling of the handles. The only way to obviate this has been to wrap the handles in papers or unsightly cloths which detracts greatly from the appearance of the wheel. The Red Cross Handle Covers do away with both difficulties in that they cover the handles, thus preventing soiling and rubbing and by their neat appearance add greatly to the looks of the machine. These covers are made of fine rubber cloth, crimped and fastened with silk cord and are manufactured by A. U. Betts & Co., Toledo, Ohio.



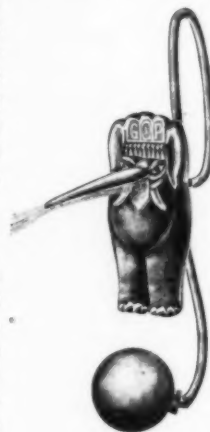
### A NEW PETROLEUM HOSE.

THE manufacture of hose that will stand oils, greasy liquids, and petroleum has long been a difficult problem for rubber manufacturers to solve. A new hose is now being sold to the tank ships of the Anglo-American Oil Co., made of flax linen

which is oil dressed and wire bound on the inside and outside. It is manufactured by W. H. Wilcox & Co., London, Eng., who have lately taken on the works formerly run by the Sphincter Grip Co.

### THE ELEPHANT ATOMIZER.

A NOVELTY upon the market which should be used only by those who are willing to suffer as well as play practical jokes is a small gold-plated elephant which when placed in the buttonhole suggests a new order of badge which will naturally arouse curiosity and sometimes direct inquiry. The idea behind this badge is that concealed in the coat and connected with the trunk of the elephant there is a small rubber bulb and tube, which bulb when pressed will throw out through the trunk a spray of whatever liquid is contained therein, water or perfume as the joker may desire. It is unique and inexpensive, the price being twenty-five cents. Manufactured by McRae & Keeler, Attleboro, Mass.



### THE STODDER PUNCTURELESS TIRE.

IN construction this is a single-tube hose-pipe pneumatic tire. The fabric used is first treated to a simple chemical process which renders it practically impenetrable by glass, nails, thorns, pins, etc., yet it does not lose its elastic or resilient qualities. This tire is no heavier than the ordinary light racing tire, and yet the manufacturers claim that it is practically puncture proof. Manufactured by the Stodder Punctureless Tire Co., 54 Warren street, New York.

### THE NUBIAN BULB SYRINGE.

WHAT is really one of the prettiest pieces of rubber work that American druggists' sundry men have yet produced, is the new Nubian syringe here illustrated. The bulb is a corrugated one, the design being especially neat, while the tubing has an absolutely smooth finish, and is of pure black rubber. Indeed every part of the syringe is rubber, the fittings and valves being of vulcanite. Not only is this piece of work black when it comes



fresh from the hands of the maker but it remains so, as they have succeeded in producing an absolutely non-blooming compound. The trade mark by which these goods are to be known is the typical Nubian head shown in the illustration, crowned with a red fez. This syringe is made in three styles, and is put up in a beautiful wooden box. Manufactured by the Davol Rubber Co., Providence, R. I.

### THE IDEAL HUNTING SHOE.

THIS shoe is made of the best quality heavy horse hide, tanned and finished as buck or moose leather is, soft as a glove and tough enough to stand the wear and tear of briars and brush and never hardening even under repeated wettings. The sole is made up of two electric soles (a new process tanned cowhide), fastened with rubber cement which renders it impervious to wet and prevents its glazing or slipping. It is very easy and flexible and is absolutely noiseless. Manufactured by M. A. Smith, 25 North 13th street, Philadelphia, Pa.

### THE JEFFREY RUBBER BELT ELEVATOR.

It has long been known that mechanical appliances for the rapid and economical handling of boxes, sacks, barrels and packing are almost indispensable in sugar refineries, warehouses, flour mills, etc. Endless chain elevators and conveyors running over sprocket wheels have generally been used. A



new and practical idea however is embodied in the Jeffrey system, where a rubber belt is used instead of the ordinary metal conveyor. Eight of these elevators were recently placed in the works of the Franklin Sugar Refinery Co., of Philadelphia, Pa. These elevators, by the way, are each 85 feet high, extending through eight floors, and have a combined capacity of elevating 3000 barrels an hour or of elevating and lowering 60,000 barrels in ten hours. These elevators are made of 28 inch 7 ply rubber belting, having arms attached at regular intervals and so arranged that barrels

or sacks can be automatically discharged at any floor without stopping the machine. They run by electric motors provided with special appliances enabling the operator to stop and start the elevator at any floor. Further than this they are extremely simple in construction, the parts being few, easy of access, and not liable to get out of order. Manufactured by the Jeffrey Mfg. Co., Columbus, Ohio.

### THE M. & W. CEMENT KETTLE.

PNEUMATIC tires when cemented to rims with liquid cement of an inferior quality, are likely to creep and come off. It is partly because they are not thoroughly cemented and partly because the cements are not good. A very practical type of cement kettle made for either gas or stove, enabling the repair men to melt cement and apply it in the easiest and most thorough manner is manufactured by Morgan & Wright, Chicago, Ill.

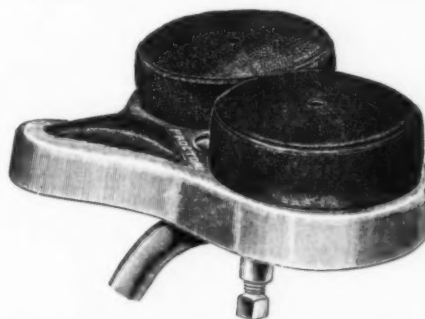
### PNEUMATIC RUBBER HEELS.

A new idea in rubber heels which the manufacturers claim

makes walking or standing one half easier consists of an oval piece of felt upon which is a small oval of metal, through which are fastened eight cup shaped rubber springs. The strip of felt covered with metal is cemented to the inner sole of the shoe, the heel coming in contact with the side opposite to the rubber cups. Manufactured by the Ulmer Mfg. Co., 144 Oliver street, Boston.

### THE PROCTOR PNEUMATIC BICYCLE-SADDLE.

THIS saddle is so constructed that the weight of the rider comes on the bones of the pelvis, and consequently relieves the pressure experienced in using various other saddles, thereby



giving a perfectly natural seat, as well as preventing chafing or numbness. The base of the saddle is made of aluminum, highly polished, strong, and extremely light in weight. The pneumatic rubber cushions are perfectly molded to the shape, supplied with the best valves, and arranged so that the end of the pelvic bone, meeting the center of the ring, distributes the pressure equally on all sides. The pneumatic cushions are held in place by a clinch in the leather cover, and can be removed instantly by deflation. The man's saddle complete weighs about 16 ounces, the woman's a trifle more. Manufactured by the Proctor Mfg. Co., Rochester, N. Y.

### GOODRICH HARD-RUBBER TROUSER GUARD.

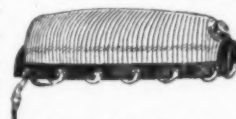
ONE of the neatest and most cleanly trouser articles that has yet been brought out for the use of the cyclist is the Goodrich Hard Rubber Guard. It is made of steel upon which is wired a coating of hard rubber. It can be used continually, and yet will never rust or soil the trousers. It is light, durable and handsome. Manufactured by the



Goodrich Hard Rubber Co., Akron, Ohio.

### THE WEEKS PNEUMATIC PAD.

AN air cushion for bicycle handle-bars to prevent lameness of the hands and arms has been put upon the market under the name of the "Weeks Pneumatic Pad." As will be seen, it is a neat pneumatic cushion which fits over the handle, and while it eases the hands does not in any way detract from the power to control the machine. It can be attached to any part of the bar, and can be used either with or without the ordinary grips. It is made in two styles, the one of leather finish costing a trifle more than the one that is cloth covered. Manufactured by the Pneumatic Pad Co., 112 Dearborn street, Chicago, Ill.





## THE BOYNTON &amp; CRISP ANTI-RATTLER.

THIS Anti-rattler has been declared a success by all who have been fortunate enough to test its worth. It is a small brass cylinder, one and three sixteenths inches in diameter, and one-half inch deep, filled with rubber and is used to prevent the rattling of the whiffletree and the breaking of the whiffletree bolt. It is hardly noticeable when applied, and with the washer, weighs but two ounces. By its use the bolt is held firmly in place, but with a sufficient elasticity to give a perfectly easy motion to the whiffletree at all times. It is being used on singletrees and light doubletrees giving excellent satisfaction. Manufactured by Boynton & Crisp, Elyria, Ohio.

## THE "CINCH" TIRE-REPAIRER.

THE newest tire-repair device introduced in the trade can be described better by reference to the four cuts herewith than by



FIG. 1.

extensive details in print. It consists of a rubber cone into which a flat-headed brass screw works (Fig. 1.) The second figure shows the two parts of the device united. Fig. 3 shows the appearance of a section of the tire after the application of the device to a puncture. To



FIG. 2.

further aid the reader in understanding the nature of the device, and the manner of its application, reference is made to Fig. 4, which shows the cone being forced into a puncture. After the cone, into which the brass screw has been



FIG. 3.



FIG. 4.

started has been placed inside the tire, the screw is tightened, rendering the puncture perfectly air-tight. This is the invention of J. P. Lambert, who has long been connected with the rubber-tire business, and it is being placed in the trade by J. P. Lambert & Co.,

whose offices are at No. 23 Park row, New York.

## BICYCLE-TIRE CEMENTS.

TWO formulæ for bicycle-tire cements are printed in the *American Druggist*, in answer to a correspondent. The first is for a cement for patching tires, as follows: Gutta-percha, 20 parts; India-rubber, 40; isinglass, 10; carbon disulphide, 160. "The cement is dropped into the crevices after they have been properly cleaned. If the rent is very big apply the cement in layers. Bind up the rubber tire tightly with thread, let dry for 24 to 36 hours, cut off the thread and remove the protruding cement with a sharp knife, which must previously have been dipped in water." For a cement to fasten tires to the rims, our contemporary says that "a hot mixture of 2 parts of pitch to 1 part of India-rubber will perhaps be found to give the best results."

## RANDOM NOTES FROM PARA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The important journal, *A Provincia do Pará*, in its leading article this morning, suggests that it may be one day that the rubber forests in Amazonia will not only be lessened in extent, through the destruction of the tree, but the quality of the rubber extracted from the remaining trees will be lowered by the constant tapping of the trees. "It is well known," the journal adds, "that Amazonia possesses almost exhaustless forests of *Siphonia* [*Hevea*] trees, but far distant and then difficult of access. Were plantations made, which could be done in a short time and with little work, near the banks of rivers, and near populated centers, the production of rubber would be far less difficult and less costly than from those far-away, dangerous regions. And so," *A Provincia* adds, "we offer to all landowners of this State the excellent idea of the Mocajuba agriculturist, Captain Ronzago, who, on his estate, called Sao Jeronymo, has planted 3000 rubber trees, and 1000 cacao trees. The land on which is planted the rubber trees has been hoed for the reason that the trees are already so far developed."

The other day a specimen of the India-rubber from the state of Maranhão was sold in Liverpool at 3s. 2d. per pound, which, considering the present rate of exchange (8½d.) is equivalent to 11\$300 per kilogram.

A most interesting series of historical articles is appearing in *A Provincia do Pará*, under the title "Pará in the Eighteenth Century," from the pen of our distinguished historical writer, Joao Lucio de Azevedo, whose connection with the India-rubber trade of this city has been mentioned more than once in your journal. These sketches will appear later in book form.

The important rubber house of Marques Braza & Co., of Pará, soon expect to add to their *flotila* the beautiful new steamer *City of Mandos* for the upriver trade.

Mr. Otto Prüsse, of the firm of Pusinelli, Prüsse & Co., and the German consul at Manáos, is in Europe with his family, for a well-earned vacation, and will probably return via New York next year.

Mr. Eduard Kanthack, who was so long with R. F. Sears & Co. here, has gone into the India-rubber and commission business on his own account. Associated with him will be his son, who has so much of the father's popularity that the new house will be sure to do well.

As to the proposed extension of the Amazon telegraph to Iquitos, little is said, or thought about it. The one to Manáos, so far as I can get the general opinion, is not a great success, nor has it so far bettered greatly the rubber market.

GRAO PARÁ.

Pará, Brazil, October 29, 1896.

## MR. SIEMENS ON INSULATING MATERIALS.

AT a recent convention of the Municipal Electrical Engineers' Association in London, Alexander Siemens, the head of the great Siemens electrical firm, spoke against the use of rubber cables, unless covered with lead, in places where they are likely to be alternately wet and dry. There was a craze, he said, for high insulation resistance tests. Pure India-rubber deteriorates much more rapidly than rubber that has been vulcanized. The use of pure India-rubber next to the wire is a mere fad, Mr. Siemens contended, and costs a great deal. Jute-insulated lead-covered cables last well, though this material, like paper, does not offer so high a resistance to sparking through as some others. His firm had just brought out a new material which offers great resistance to sparking through, and his remarks concluded with particulars of some recent tests.

## THE DEMAND FOR RUBBER GOODS ON THE AMAZON.

By M. F. Sesselberg (Pará, Brazil).

THE trade in India-rubber goods which already exists in the Amazon could, without doubt, be increased many fold with the proper effort. Among the articles embraced under this head are some rubber belting, considerable packing (used wherever there are steam-engines), ship's hose, garden-hose, toys, druggists' sundries, clothing, and elastic goods. Nearly everything made in rubber finds its way sooner or later to Pará, and thence to Manáos and the many smaller towns and stations up the Amazon. Some of these articles come from the United States, but many more from Europe, and especially from Germany, on account of lower prices than elsewhere.

Formerly, for example, rubber combs were imported at Pará only from the United States, and some still are ordered where the importers want a superior article, but Germany now furnishes the greater part owing to being able to provide a cheaper article—and brittle, nasty things they are too. Foot wear—principally shoes—comes from the United States. In every boot and shoe store one can find goods manufactured by the Boston Rubber Shoe Co. Some rubbers have been imported from France and Germany, but after the first experience in these articles, the buyers return to the American shoe as far superior. They are better prepared than any others to stand the effects of an equatorial climate.\* Belting and garden and ship's hose are principally imported from England, where a cheaper article is available, as well as elastic articles and rubber clothing until now little used here. But mackintoshes of very light material, made so as to not become sticky in the rainy season, if properly introduced, ought to become popular, when it is to be remembered that the rainy season comprises certainly two-thirds of the year on the Amazon river. Rubber toys all come from Germany, that being the cheapest market. Druggists' sundries come from the United States and England.

The Pará market is a peculiar one, in that nearly always the price is considered sooner than the quality of an article. The traders, to suit their customers,—especially those in the thousand up-river stations, want the cheapest articles to be had, of course there are some exceptions to this rule. A certain class of dealers in Pará whose customers demand first-class goods, import them from the United States. These are few; the larger part of the population prefer cheaper articles, even if they be of inferior quality. In the interior the ordinary customer, who knows no difference between a good or poor rubber article, will only buy where he can get it the cheapest, and the seller is bound to have the cheapest goods, to "do" the poor fellow out of all he can. Another reason why a good article is not wanted is the habit many of the consumers in the interior have of discarding an article as soon as it has lost its newness. Sometimes, not remembering where it has been laid away, when in need of it again the lazy fellow will sooner buy a new one than bother to hunt up the old. One great drawback to the importation of American articles is the European credit system. An American shipper, will draw on his customer, at the utmost at from thirty to ninety days' sight, while from Europe, six months' credit is obtainable and this is no little advantage to the Pará merchant, who thus has six months in which to pay his draft, which he can do when he pleases within this time, often taking advantage of a favorable rate of ex-

change. True he may do this in the thirty or ninety days sight, but with half the time.

It may be of some interest to the general manufacturers who read THE INDIA RUBBER WORLD, to make a brief note of other articles of import. This market has been explored by American manufacturers, and merchants, for a long number of years. The consular archives bear records of vessels from the United States, way back into the "thirties," and even before, when this state (then province) was a dependency of that of Maranhão. American provisions, and manufactures were imported to Pará, via Maranhão! Flour, lard and other provisions, dry goods, hardware, brooms, woodenware, machinery, lumber and all sorts of manufactures formed a general cargo from the United States. The total tonnage of the vessels and steamers of the present day is continually increasing, but as for the United States the drawback is this: *when samples of new articles are sent here, the merchants send them at once to the European markets*, with endeavors to obtain similar at cheaper prices, and generally with success. For example, bleached shirtings from the United States were at one time here all the rage and held the field for a year, or so, when English imitators drove them out with cheaper goods. This cheapness was obtained by making the goods a trifle lighter, and an inch or two narrower. An English, or European manufacturer, will make any width, style, or pattern of goods a customer desires, and put them up in any shape desired, while the American is too independent; he will not satisfy these exigencies of foreign markets. He has a home market for his staple goods, and will not be annoyed with such orders.

Of all articles of dry goods that the European manufacturer has not been able to imitate, there is one—the Massachusetts blue drills. Attempt after attempt has been made to imitate them but without success. Everything else has been imitated with such dexterity that even experts have been almost unable to know the difference, and even these only by their knowledge of the width of goods. American hardware is being replaced by that manufactured in Germany, of the same shape, style and finish, but with American manufacturers' names. They will even embellish blades of the instruments, with any device the buyer wishes. Besides, the European manufacturers, or the commission houses here, keep traveling agents always in these places with a full assortment of samples, and these agents are continually "drumming up" customers, showing samples, and obtaining the principal part of the orders for many goods, which might easily come from the United States. True, some of the American houses have agents here, but without samples, and these are doing the best they can to influence buyers to trade with the United States, but it is rather up-hill work to compete with the European cheaper articles; the longer credit given, and the full display of articles. One American house here is about to begin an innovation. An import department has been opened, and a full line of samples is shortly expected from the United States, and no doubt if the new drummer has plenty of energy, a new field will be opened.

Now "a word to the wise." Many rubber goods from the United States could take the place of those imported from Europe, were samples to be exposed here, and the superior quality of the goods shown to customers, but these samples are not here, and as seeing is believing, anything short of the former will not convince the buyers.

\* Even many first-class journals make the mistake of calling this a tropical climate. It is equatorial, not tropical.

## NEW TRADE PUBLICATIONS.

THE HISTORY OF THE THING. THE RELATION OF THE RAW Product to the Finished Material. New York: Hodgman Rubber Co. [Japanese paper.  $3\frac{1}{2}'' \times 6\frac{1}{2}''$ . 80 p.]

It is a rule, consistently adhered to by the firm named in the above title, that it not only pays to advertise liberally whatever they may have to sell, but that whatever advertising device may be adopted should be made as attractive as possible, with a view to prepossessing possible buyers in favor of their goods. This rule has by no means been departed from in the preparation of the booklet lately gotten out by the Messrs. Hodgman in relation to their widely-known "Hodgman mackintosh." On the front cover is a clever conceit, artistically wrought out, showing the rubber country in the remote distance and a stylish woman, wearing a mackintosh, in the foreground, while midway two natives of Pará state are dragging a huge "biscuit" of India-rubber from the forest to the factory. And this is the key to the book—it is "the history of the thing" that its writer has started out to give. After discussing the subject of rubber in general, and the various articles of modern rubber-manufacture, the book leads up to the subject of waterproof clothing, devoting some attention to the defects—or, at least, the objectionable qualities—of mackintoshes as they once were made. These were "the unpleasant odor, the want of pliability, the ungainliness, and the propensity to wet through." As a result of setting to work to remove these obstacles to the popularity of waterproof garments, the Messrs. Hodgman have succeeded in producing the high-grade garments now sold under their trade-mark. This booklet is both cleverly written and admirably illustrated. The sketches, printed in red ink in the margins of every page, illustrate a wide range of uses of India-rubber, from the infant's rattle to the full suit of the diver; the processes of rubber-gathering and rubber-manufacture; and, particularly, the various purposes which the "Hodgman mackintosh" serve. A prettier or more artistic advertising pamphlet we do not remember to have seen in the trade.

"EVERYTHING IN RUBBER GOODS." [A CATALOGUE] FROM C. J. Bailey & Co., No. 22 Boylston street, Boston, Mass. [Paper.  $3\frac{1}{2}'' \times 7''$ . 66 p.]

THIS is the largest catalogue yet published by the firm above named, who have built up an extensive business mainly in the smaller applications of India-rubber, many of which have been patented by the head of the firm. Beginning with rubber brushes, for toilet and other uses, this catalogue proceeds to list rubber heel lifts, druggists' and stationers' sundries, gloves, "footholds," bath-tubs, plant-sprinklers, elastic hose, fruit-jar rings, air-goods, chair-tips, and no end of other items, including waterproof clothing. A feature of the business of the Messrs. Bailey is the filling of mail orders, and this illustrated catalogue, giving net prices for every item, has been gotten up with special reference to the requirements of customers who order goods at retail by letter.

[CATALOGUE OF] MECHANICAL RUBBER GOODS. THE MANHATTAN Rubber Manufacturing Co., New York. [Flexible leather.  $4\frac{3}{4}'' \times 7\frac{3}{4}''$ . 74 p.]

A CATALOGUE, compact in style, with no superfluous matter used in describing the extensive line of goods made by the company, and which therefore embraces very much information of interest to buyers of mechanical goods without being too bulky. This is a description which applies to the regular edition of the new catalogue of the Manhattan company. The copy which lies on THE INDIA RUBBER WORLD table has blank leaves interspersed throughout the book, between the printed

pages, thus adding to the convenience of a customer fortunate enough to possess such a copy. There are also a number of blank memorandum leaves at the end of the book, of paper of such quality as not to add unduly to the size of the book. The catalogue is well printed and profusely illustrated.

CATALOG OF RUBBER BOOTS AND SHOES, 1896-97. HOOD RUBBER Co., Boston, Mass. [Crepe paper,  $3\frac{1}{2}'' \times 6''$ . 32 p.]

THIS is the first official announcement to the trade of a new firm that is new only in name, and even the name is not new, since the name of Hood has been linked with the rubber trade as long as most dealers in and wearers of rubber footwear have known anything about such goods. In changing their business connection the Messrs. Hood announce that the "Hood rubbers" are offered to the trade with all that was good in their past reputation back of them. A full line of samples has been gotten out, and this well-illustrated catalogue and price-list has the appearance of having been issued from a long-established house. We note a large number of specialities in cartons for the people who "want something better than is good enough for most. They ask more for style and fit in a rubber shoe than weight and strength."

TECHNISCHE UND ELECTROTECHNISCHE HARTGUMMI-ARTIKEL. Mannheimer Gummi-, Gutta-Percha-, und Asbest-Fabrik, Mannheim (Baden). [Paper.  $11'' \times 15''$ . 36 plates.]

THE first two pages of this catalogue contain ten full-sized drawings of hard-rubber telephone-receivers, with no reading matter other than the name of the manufacturer across the top of each page, and a number under each drawing, referring to an accompanying price-list. The succeeding pages, to the end, are filled in a similar manner, the whole work embracing a large number of adaptations of hard rubber to scientific and technical uses, including, of course, the whole range of electrical appliances into which hard rubber enters. In some cases, where the pages of the catalogue do not admit of full-sized drawings, they are given on a smaller scale, the extent of the reduction being indicated. The drawings are all in outline, and reproduced by lithography upon a heavy quality of paper. The accompanying price-list failed to arrive with the catalogue, although a recent letter from the company in Mannheim gave notice that one had been forwarded.

THE DRUGGIST SUNDRYMAN. SEPTEMBER, 1896. FOX, FULTS & CO., No. 52 Park Place, New York; No. 18 Blackstone street, Boston. [Paper.  $8\frac{3}{4}'' \times 12''$ . 32 p.]

THIS is a catalogue of the widely-varied stock of an extensive jobbing house in druggists' sundries, of which a new edition is printed each season in the form of a periodical. The present number embraces some new things in the line of India-rubber druggists' sundries, and it may be noted that of the 32 large pages, twelve are devoted wholly to rubber articles, while mentions of other rubber goods are scattered through several other pages.

SPALDING'S FALL AND WINTER SPORTS. CATALOGUE NO. 107. Season 1896-97. A. G. Spalding & Bros., New York. Chicago. Philadelphia. [Paper.  $8\frac{3}{4}'' \times 11''$ . 48 p.]

INDIA-RUBBER has become essential to so many sports that the catalogue of any leading house devoted to the sporting-goods trade deserves to be recorded among the publications of the rubber trade. While there is nothing especially novel in the way of applications of India-rubber to sporting-goods in this catalogue, it can be noted that the publication is larger than any preceding edition, and that the word "rubber," and



especially the phrase "Pará rubber," seems to occur even more frequently than usual in its pages.

POCKET MAP OF GREATER NEW YORK . . . TOGETHER WITH A map of New York city proper. Published by the Candee Rubber Co., New Haven, Conn., and New York. [Folded in cover,  $3\frac{1}{2}" \times 6"$ .]

A WELL-ARRANGED map of convenient size, useful alike to New Yorkers or visitors to the city, put up in a form suitable for the pocket. On the cover and on the margins of the map the merits of Candee rubbers are entertainingly set forth by the advertising expert of the United States Rubber Co.

### A NEW BOOK ON THE AMAZON STATES.

THE Baron de Marajó, who will be remembered by INDIA RUBBER WORLD readers as the author of a comprehensive article on the Pará rubber industry, has published a descriptive work on the states of Pará and Amazonas\* more complete than anything of the kind that has appeared hitherto. Most writers on this country have marred their pages either by exaggerations of the good points or by going to quite the other extreme. The truth regarding the resources of Amazonia has, however, been revealed by the work of some recent explorers, among whom some of the most prominent have come from the United States.

The first chapter of this work discusses the disputed boundaries of Pará and Amazonas, their hydrography, meteorology, geology, etc. It is noted that more than 400 kinds of useful woods exist in the forests. Gold, silver, and the less precious metals are found. But rubber-gathering continues to absorb the energies of the people to the exclusion of almost everything else. The author agrees with Henry Smith that the climate does not deserve its reputation abroad for insalubrity. Chapters II and III are devoted to the principal tributaries of the Amazon on the right and left banks. The Peruvian margin of the Javary is claimed not to yield a great deal of India-rubber, but, owing to the connivance of officials, much of the rubber produced on the Brazilian side is credited to Peru, and thus escapes the payment of export taxes. There are savage Indians on this stream, but the fact of their being cannibals remains to be proved. The Jutahy abounds in rubber, but it has been little explored. The same is true of the Jururá, of which still less is known. The Purús, a great producer of rubber, is navigable for 1620 miles from the Amazon, into which it discharges through five mouths. The pages devoted to the Madeira are most interesting. Its basin is as extensive as the Nile valley, and the population along its banks is estimated at 70,000. The Madre de Dios, Mamore, Beni, and Guaporé—rubber-producing tributaries of the Madeira—have not been fully explored. The same can be said of the Xingu, a branch of the Amazon with untold rubber wealth. Considerable space is given to the island of Marajó, already described in THE INDIA RUBBER WORLD, which is as large as England, contains much India-rubber, and is described in this book as "the gem of the Amazon." Chapter IV is devoted to the islands and lakes of the Amazon basin, and chapter V to the progress of this section.

Forty years ago the city of Pará was scarcely known. To-day its area equals that of Madrid, it has a population of 100,000, its commerce is important, and it has imposing public buildings, the finest theater in Brazil, five daily newspapers, eight banks, and other evidences of modern progress. The population in 1832 was only 12,467. The population of Manáos has increased during thirty years more than three-fold, and the city bids fair to become one of the first in South America. Of

\*As Regress Amazonas: Estudos Chorographicos dos Estados do Graó Pará e Amazonas. Pará and Lisbon.

India-rubber the Baron says: "With singular advantage to us, rubber obtains daily new applications, and the Amazon valley being the only producer of rubber of the first quality, its value is constantly increasing, and private fortunes are thereby increased. New foreign houses are being established in Pará and Manáos, and the resulting increase in the revenue of the two states reveals itself in beautiful new streets and fine new suburbs." An excellent map of Amazonas accompanies this book.

M. F. SESSELBERG.

Pará, Brazil, September 1, 1896.

### TO FIGURE SHRINKAGE IN CRUDE RUBBER.

IT would seem almost incredible that there should be a divergence of opinion and method in arriving at the net cost of rubber after washing, sheeting and drying it, yet the fact remains.

To assist those who have not studied this question, a rubber importer furnishes "the easiest method of arriving at a correct result."

Take for instance an average priced rubber:

Example A.

100 lbs. rubber @ 50 cts. lb. = \$50.00  
20 lbs. shrinkage = 20% or 1-5th.

80 lbs. net costs \$50.00 as above.

80 lbs. @ \$50.00 (.62.50 per pound).

480

200

160

400

400

Some, however, figure it this way:

Example B.

100 lbs. @ 50c. per pound.

Shrinkage 20% = 1-5

50c. + 1-5 = 60c.

Example A—correct method—net cost .62.50

Example B—incorrect method—net cost .60.00

\$ 2.50

a difference of 4%, which if it occurs in manufacturing a large amount of goods where rubber is the greater part of the compound would make quite a hole in the profit. On the face of it it would seem reasonable that if 1-5th was added to the cost of 50c. that the correct result would be reached, but, as we have shown, such is not the case.

### TO PLANT RUBBER VINES.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Arrangements are being made to form a mercantile company to operate in Africa, the main object of which is to trade American goods for rubber, ivory and other African products. I have been asked to take charge of this company and make a showing of the possibilities of a successful future of such a business so that the capital may be raised to \$100,000. I believe that I can, with my past seven years of African experience, lead such a company to a successful future. We are anxious to get the last bit of information in regard to the prospects for trade. Can you give us any real encouragement to push such a company? I hope to go to raising the rubber vines in large quantities in the African forests.

J. H. CAMP,

Lima, O., October, 1896.

## MR. APSLEY AT HOME.

AS soon as the election was fairly over Congressman Apsley returned to Hudson, Mass., and was greeted by the employees of his rubber company with the warmest sort of congratulations upon his successful work as vice-chairman of the Republican National Committee. Their congratulations took the form of a resolution as follows.

We, the employees of the Apsley Rubber Company, offer our congratulations to the Hon. L. D. Apsley on his successful work as vice-chairman of the National Congressional Committee, and take this method of showing our appreciation of his efforts and of the success of sound money.

Accompanying the congratulations they presented him with a huge mass of chrysanthemums tied with the national colors. In response Mr. Apsley said:

"My Friends: I appreciate keenly the compliment you desire to pay me personally as your employer, congressman and vice-chairman of the National Congressional Committee. I cannot too feelingly express to you the very great pleasure it gives me to know that you, my employees, are unanimously—I say unanimously because I know that some before me are Democrats—in favor of honest money, honest government and protection. You, with many others of the wage-earners of this glorious country of ours, have placed patriotism before party loyalty. Indeed, it fills me with satisfaction to know that the great toiling masses of our land stand ready to uphold national honor and to denounce any party that would appeal to class or sectional prejudice.

"It is a glorious day for the country and for the party of law and order, and you, with your toiling brothers, 15,000,000 in number, have answered the candidate of the Democratic-Populist party, Bryan, who slandered all workingmen last week in Chicago by intimating that many would don the McKinley button and march in McKinley processions to deceive their friends and employers, and would vote for dishonest money, repudiation and anarchy. I personally hurl back for you and them the vile slander, and say to him that in this land where all men are equal before the law, where good wages and comfort reign, the workingmen do not bow to coercion, but walk erect to the polls and cast their vote, as they did yesterday, according to the dictates of their own consciences.

"I congratulate you and myself upon the good feeling that prevails this morning throughout the country between the honest toilers and capitalists."

In this connection it is interesting to note what the *Washington Times* said with regard to Mr. Apsley's nerve as a harmonizer of the factions along the Pacific coast and the wonderfully good results that followed his Herculean task in that section.

"Early in the campaign Messrs. Hanna, Balcock and Apsley conferred as to the Pacific slope. Then Mr. A. went West armed with carte blanche authority to deal with the sand lot and gravestone heelers of the coast. He reached San Francisco, called a meeting of the two local leaders, concealed two guns on his person, and then said that peace must prevail. He read the Riot act, the Declaration of Independence, Magna Charta, and wound up with the familiar 'Gentlemen, the goods must be delivered.'

"The tenderfoot bluff worked charmingly, and when Mr. Apsley left peace was breeding over the Pacific coast, and doves were flying all around with olive branches in their bills. In the past the coast has been a lost paradise, because of the factions, and Mr. Apsley was the first and only Lochinvar to carry off the frisky California fighters.

"In consequence, California and Oregon fell into the Republican column, despite the fact of their free silver location and the evangelizing work of the 'Martyrs of 1896.' In 1892, California was split by internal dissensions, and gave one electoral vote to the Republicans and three to the Democrats. Oregon gave three to the Democrats and one to Populism. It was all different this time, thanks to Mr. Apsley."

## RUBBER SHOES A GENERATION AGO.

IT may interest some of the younger members of the rubber-shoe trade to have an opportunity of comparing with the prices of to-day a price-list issued thirty-two years ago. The first point to attract attention will be the apparently very high

prices, but when it is remembered that the price of gold ranged during September, 1864, between 191 and 254, making the paper dollar worth only 39 to 52 cents in gold, men's shoes at \$2 were not, as a matter of fact, so much higher than at present as one might think on first impression. Attention is called to another point of interest by the *Boots and Shoes Weekly*, which says: "The short list of thirty-six varieties, practically the only kinds made, compared

with the present big assortment of styles, shows that rubber-footwear manufacturers have kept pace with the procession. In 1864 the common-sense toe had to answer to all of the demands of the trade, but that things are different now is demonstrated by the range of toes existing, from London to needle toe, while the fewer varieties of those days would lighten the burden of the retailers of the present. Undoubtedly the lack of style and the high prices would cause the consumers to protest in a more than mild manner. The higher the degree of civilization, the greater the wants seem to be well illustrated in regard to rubber footwear."

## A PALM OIL STORY.

MR. F. H. GEORGE, Mgr. of the New York Belting & Packing Co., Ltd., tells the following story which illustrates the ease with which rubber goods may be injured in the compounding. When he was in the west a manufacturer sold his house a lot of surfaced garments. These goods were hardly in stock before the rubber began to come off the fabric in great flakes. He not only shipped the goods back but went and saw the maker, who was almost in despair, as he could find no reason for the trouble. His compound was a good one and had been carefully gone over several times without any clue as to the reason for its failure. Finally, upon going into the compound room, he noticed that just outside of the door was a keg of gear grease, while inside the door was a similar package of palm oil. On questioning the intelligent personage who weighed out the compounds he discovered that he had taken it for granted that the two greases were identical, and to save steps had used the gear grease in place of the palm oil, in other words, had used a mineral oil in place of a vegetable oil.

## GOODYEAR SHOE ASSOCIATION.

## GROSS PRICES OF GOODS.

Adopted September 14, 1864.

|  |        |
|--|--------|
| Men's Shoes of all kinds,.....                           | \$2.00 |
| Men's Footholds,.....                                    | 1.50   |
| Men's Short Boots, 16 inches wool lined,.....            | 8.00   |
| Men's Short Boots, 16 inches, net lined,.....            | 8.00   |
| Men's Long Boots, over 16 inches,.....                   | 9.50   |
| Men's Top or Hip Boots,.....                             | 11.00  |
| Men's Arctic Gaiters, wool lined,.....                   | 4.00   |
| Boys' Shoes, 1's to 6's,.....                            | 1.50   |
| Boys' Boots, 1's to 6's, wool lined,.....                | 5.25   |
| Boys' Boots, net lined,.....                             | 5.25   |
| Youths' Shoes, 13's and under,.....                      | 1.25   |
| Youths' Boots, 13's and under,.....                      | 4.00   |
| Women's Shoes of all kinds,.....                         | 1.50   |
| Women's Gaiters,.....                                    | 1.75   |
| Women's Long Boots, felt or wool lined,.....             | 4.00   |
| Women's Long Boots, net lined,.....                      | 4.00   |
| Women's Arctic Gaiter Boots, cloth top, wool lined,..... | 3.00   |
| Misses' Shoes, 10's to 2's,.....                         | 1.25   |
| Misses' Arctic Gaiters, cloth top, wool lined,.....      | 2.25   |
| Misses' Long Boots, net lined,.....                      | 3.00   |
| Children's Long Boots, net lined, 9's and under, 2.50    |        |
| Children's Shoes, 9's and under,.....                    | 1.00   |
| Children's Arctic Gaiters, wool lined,.....              | 1.75   |
| Men's Union buckled overs, felt ventilating, ..          | 3.50   |
| Men's Union felt overs, felt ventilating,.....           | 2.75   |
| Women's Union felt overs, felt ventilating,.....         | 2.00   |
| Women's Union buckled overs, felt ventilating,.....      | 2.75   |
| Men's Felt Gaiters, felt ventilating,.....               | 2.25   |
| Men's Ventilated Buckle Gaiters,.....                    | 3.50   |
| Women's Ventilated Buckle Gaiters,.....                  | 2.75   |
| Misses' Ventilated Buckle Gaiters,.....                  | 2.00   |
| Children's Ventilated Buckle Gaiters,.....               | 1.75   |
| Men's Ventilated cloth overs,.....                       | 2.75   |
| Women's Ventilated cloth overs,.....                     | 2.00   |
| Misses' Ventilated cloth overs,.....                     | 1.75   |
| Children's Ventilated cloth overs,.....                  | 1.25   |

All boots having a double sole to be charged at one dollar per pair in addition to the above prices.

## REQUISITES OF A GOOD LAWN SPRINKLER.

THE near approach of the hose season suggests that now is the time when the wideawake dealer in rubber goods begins to prepare for the demand for lawn-sprinklers and other hose-fittings which belong properly to the rubber-man's stock in trade. Garden hose has been in use so long that few can remember when it was not a staple article of trade, and yet the demand increases steadily, with the extension of the building of water-works all over the country. While the primary purpose of such hose—the watering of lawns, plants, roads, and pavements—may be served by hand-sprinkling when one has the necessary leisure and patience, the work can be done more thoroughly and is more apt to be done where the hose equipment includes a modern lawn-sprinkler. The development of these appliances, by the way, has proceeded until now sprinkling is beginning to be applied, with profit, to no end of conditions where the use of a hand-sprinkler would not be practicable. By the use of the lawn-sprinkler, the irrigation of market-gardens, small farms, and nurseries during a dry season may protect the owner from heavy loss; or it may be applied as well to watering the interiors of green houses.

But there are differences in lawn-sprinklers, just as one star differeth from another in glory, and some sprinklers that could not be compared even to the feeblest of all the stars. The rubber-man will make a mistake, therefore, who pins his faith to a single lawn-sprinkler, and is content to keep that alone in stock. There must be taken into consideration the size of the grounds to be watered, the taste of the purchaser as to the style or appearance of the sprinkler, and last, but not least, the matter of price, in which there is a variation to suit differences in quality.

If all the desirable qualities of a lawn-sprinkler could be combined within a single specimen it would embody some such bill of particulars as this:

*Efficiency.*—It would "sprinkle," whatever the water-pressure—high, low, or variable; it would not become clogged with dirt or gritty substances in the water; the spray would be capable of control, now as light as vapor, and again as heavy as the water-supply will admit; it would distribute water evenly; it would do its work without constant watching.

*Durability.*—It would be made of the metals least liable to wear, and properly protected against rust; any bearings, especially, would be the best metal for the purpose; the construction would be such as to prevent damage if the sprinkler should fall or be stepped upon.

*Simplicity.*—The fewer parts the better, rendering the sprinkler easier to put in use and less liable to get out of order.

There are two considerations—ornamentation of the sprinkler and the price to be charged—which must depend upon the individual preference of the purchaser in each case. There are some other headings under which differences of construction of the great variety of lawn-sprinklers in the market may be considered. First, as to the object of the proposed use of the fixtures. As already intimated, small farming operations may be facilitated by watering plants with a sprinkler, but it would be desirable to have one which could be so regulated that freshly-sown seeds would not be washed up or young plants uprooted. Nowadays insecticides are largely used by means of spraying fruit-trees, though of course special provision has to be made for these. But in buying a sprinkler merely for the small grounds about a suburban home, the size and shape of the grounds need to be considered. A sprinkler open to no other

objection might be inconvenient if it could not be used without spraying a walk, for instance. For such cases sprinklers have been designed for spraying only half a circle.

In the construction of sprinklers, the simplest form is an iron head, weighing not more than two pounds or so, without any revolving parts, which may be moved about the grounds without difficulty. Others are held in place by a spike or peg driven into the ground, or by a screw driven into a board. The sprinkler may rest upon legs, three or four in number, with or without wheels, and others rest upon a sled, which facilitates the removal of the sprinkler about the grounds. The problem of getting the sprinkler about is solved by one manufacturer by mounting his device upon three wheels, with an arrangement whereby, under an ordinary water pressure, "it will drag 100 feet of garden hose and propel itself slowly and continuously in either a straight line or a circle of any desired diameter, while its speed may be varied at will from 15 to 500 feet per hour. By means of a figured dial-plate it may be set to travel any desired distance, stopping automatically when it has reached the end of its course." Finally there are the sprinklers mounted on standards, with or without revolving arms, capable of a number of variations for ornamental effect. It is desirable that the base of such a sprinkler should be heavy enough to prevent it from turning over readily.

One sprinkler is advertised to produce a spray from 1 to 30 feet in diameter, and various sprinklers vary in capacity from these figures up to 96 feet. The size of the spray is regulated in some cases by the pressure of the water and in others by mechanical means—as by screwing a knurled sleeve up or down, yielding anything between a straight stream and the finest widely-spread spray. The changing of the circular spray to an arc or half-circle is done in most cases by the mere turn of a thumbscrew, or something else equally simple.

The ball-nozzle form of sprinkler has not yet been mentioned, as this article has reference more particularly to the mounting of the sprinklers. The ball-nozzle can be adapted to almost any construction of sprinkler. One advantage claimed for it, and for some others as well, is that its use does not result in burst hose, caused by back pressure.

The Pleuger & Henger Manufacturing Co. (St. Louis) catalogue eight different lawn-sprinklers, each in sizes for  $\frac{3}{4}$  inch and 1 inch hose—varying in price from \$1.50 for a plain iron sprinkler head to \$7.50 for a high-stand sprinkler, with four revolving arms, nickel-plated.

King & Knight (Boston) catalogue a standard sprinkler, with eight arms, central jet, and ball and basket, for \$11. The same sprinkler head can be had for any other attachment, including its use at intervals on iron pipes (instead of hose), for irrigating gardens and greenhouses.

H. D. Edwards & Co. (Detroit, Mich.) have ten sprinkler items in their catalogue, the peg type listed at \$3 per dozen, and the most expensive standard eight-arm sprinkler at \$7.50 each.

The Crescent Brass and Iron Works (Detroit, Mich.) offer ten items, ranging in price from \$2.50 per dozen for a cast-iron sprinkler for  $\frac{3}{4}$ -inch hose, covering a surface 36 feet in diameter. They have sprinklers on standards twelve inches high and sprinklers mounted on sleds.

The Deming Co. (Salem, Ohio) manufacture a sprinkler mounted on a special form of sled. Their specialty is the manufacture of spray-pumps for insecticides.



The Hancock Inspirator Co. (Boston, Mass.) also have a single specialty—a knurled-sleeve head referred to above, by means of which any desired form of spray may be obtained.

J. H. Kohmescher & Co. (Cincinnati, Ohio), in the catalogue of hose goods kept in connection with their large stock of rubber goods, include about every type of sprinkler referred to above, including the "traveling" sprinkler.

F. E. Koehler & Co. (Canton, Ohio), manufacture the "Mystic" sprinkler, mounted on a pipe twelve inches high, adjustable for a full or semi-circle.

W. D. Allen & Co. (Chicago, Ill.), extensive dealers in India-rubber goods, include the "Magic" spray-pipe in their catalogue.

The Adams & Westlake Co. (Chicago, Ill.) make a specialty of the "Duplex" adjustable sprinkler.

Peck Brothers & Co. (New Haven, Conn.), manufacture a line of lawn-sprinklers.

The Noera Manufacturing Co. (Waterbury, Conn.) manufacture the "Waterbury" lawn-sprinkler.

The Peninsular Brass Co. (Grand Rapids, Mich.) offer the "Shower" lawn-sprinkler, embodying some new features for which a patent has been applied.

Henry F. Knowles (Boston, Mass.) in his catalogue of hose-fittings, does not include any of the sprinklers, but only the leading types of hose-pipe, for hand sprinkling.

This does not exhaust the list of lawn-sprinkler catalogues, but will serve to indicate to those who are not familiar with the trade how extensive and varied are its details. There are several companies who make a specialty of nozzles. Jones & Rogers (Chicago) advertise the "Child's Rain-Maker Nozzle" and the "Child's Revolving Fountain."

In succeeding issues of THE INDIA RUBBER WORLD articles will appear on nozzles and hose-mending devices.

#### WHY THE CARRIAGE-CLOTH TRADE IS DULL.

USUALLY at this time of the year contracts for the next season's supplies of rubber carriage-cloth have been placed. This year, from a variety of causes, buyers have held off, leaving the factories as a rule inactive. The situation is so pronounced, in fact, that scarcely an important contract for next season's trade has been given out. Not only have the manufacturers of carriage-cloth experienced a lack of orders for future supplies, but they have suffered loss from the recent numerous failures in the carriage-manufacturing trade, including some of their customers.

A certain branch of the India-rubber trade, therefore, becomes interested in a study of conditions in the carriage industry. But in the absence of accurate details intelligent conclusions can hardly be reached. It is asserted, on one hand, that the collapse of so many carriage firms during the past two months was due to overproduction, stimulated by certain conditions a year ago or more. Certain it is that the productive capacity of a good many plants was increased within the recent past, but before deciding whether or not there has been overproduction it would be necessary to know how many vehicles have been made since January 1 last, in comparison with the same period of former years.

The manager of a very important carriage-manufactory, in reply to a question from THE INDIA RUBBER WORLD, expressed the opinion that the recent troubles in the trade had not been due to overproduction, as the term is commonly used. "Anybody can sell carriages now," said he, "but selling carriages so as to get pay for them is a different thing." At the same time he did not believe that the depression in the car-

riage trade had resulted wholly from failure to make collections from customers. His own company, in view of the general distrust in business circles, had been unusually cautious about extending credits, with the result that bills as a rule had been met promptly. No, doubt, however, there were other concerns in the field, more recently established, with a reputation for their product yet to be won, with limited experience and with capital inadequate to a season of emergencies, who had made sales without due caution, and who had been forced to the wall on account of the coincidence of difficult collections and maturing obligations. Some of these, as a means of inducing trade, probably had lowered prices to a marked degree, but without attaining the result desired. There are some times when people will not buy, no matter what inducements are offered, in the way of prices or otherwise.

A member of the trade who is in a position to be more than ordinarily well informed, said to THE INDIA RUBBER WORLD that in his opinion the recent failures were by no means to be regarded as indicating the decadence of carriage-building. He thought that a parallel might be drawn with the bicycle trade, in which failures during the latter part of the summer were numerous, and involved large amounts of capital, in spite of which the recognized leaders in the trade are proceeding with their arrangements for a large output for 1897, without any concession from this year's prices. While it was to be regretted that failures had happened, involving the ruin of worthy people, no doubt it would be strictly true to say that both the carriage and the bicycle trades would be benefited for some time to come by the elimination of the weaker elements from the competition.

It remains a fact, however, in spite of the most favorable showing which prominent manufacturers have been able to make, that the carriage trade has been seriously depressed. A single fact which proves this is the failure of the Carriage Builders' National Association to hold their annual meeting this year, evidently owing to a feeling on the part of the executive committee that an enthusiastic convention in the midst of a dull season would not be in the nature of things. Yet if it should turn out that the rise in the price of wheat has benefited the farmers, without doubt the buying of carriages and buggies will speedily increase in volume.

According to Mr. M. W. Bath, manager in New York for the great Studebaker concern, a favorable condition for the carriage industry in the United States is the growing export trade, which will serve as a safety-valve against overproduction. Yet there is a drawback to the extensive exportation of carriages from the United States owing to the disposition of buyers in most non-carriage-building countries to insist upon low prices, without considering the quality of material or workmanship. By the way, Mr. Bath, whose company are probably the largest consumers of carriage cloth in the country, paid a high tribute to this product of the rubber industry, calling attention to the high standard maintained by the manufacturers. Without this cloth it would be impossible to produce carriages of equal grade at such small cost as at present.

#### OF INTEREST TO DRUGGISTS-SUNDRIES MEN.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Some little time ago I invented a combined invalid-ring, fountain syringe, water-bottle, and neck-bag. I am so placed that I can do but little with it and am willing to sell the patent at a fair price. The bag makes up very neatly, and I can show sample to any one interested.

JOHN SOHAN.

No. 233 North Sixth street, Brooklyn, N. Y.

## DEATH OF JOHN R. FORD.

JOHN R. FORD, who died on November 29 at his residence, No. 507 Fifth avenue, New York city, had been for some time the oldest living rubber-man in this country. He was born June 21, 1817, in the outskirts of New Brunswick, N. J., where his father, Joseph Ford, successfully cultivated a large tract of land and from time to time was elected to various public offices in the district. The subject of this sketch, after receiving an education in New Brunswick, became a clerk in a wholesale dry-goods store in New York. After several years of experience in this capacity he returned to his native place and engaged on his own account in the retail dry-goods trade.

About the year 1844 Mr. Ford became interested in the India rubber industry, through the following circumstance. In that year he married Miss Elizabeth Bishop, whose brother, James Bishop, also of New Brunswick, had already laid the foundation of what became a lucrative shipping and commission business, with a line of fleet sailing vessels between New York and the Brazilian coast. Mr. Bishop's correspondent and agent in Pará was a Mr. Morris, the United States consul there, and a man of unusual intelligence and no small business ability. It was largely due to his suggestions that Mr. Bishop became interested in the importation of India-rubber. Of course the state of the development of the rubber industry—which just at that time was occupying the attention of several citizens of New Brunswick—had its influence. On becoming satisfied that the new business had a great future, he induced Mr. Ford to join him in the manufacture of rubber. They commenced on a small scale under the style of John R. Ford & Co., in an old mill belonging to the Bishop estate, where Milltown now stands. Their success was such that in 1845 Mr. Ford disposed of his dry-goods business.

Later the business was conducted under the name of the Ford Rubber Co., a partner in which was Christopher Meyer, who had joined the new enterprise from the rubber works of the once famous Horace H. Day. Mr. Meyer became an important figure in the rubber trade, and in time the business was reorganized as the Meyer Rubber Co., a name which is still retained, the site of the factory being still at Milltown. Another employé of Ford & Co. was Mahlon C. Martin, who became subsequently president and treasurer of the New Jersey Rubber Shoe Co.

In 1859 Mr. Ford became a resident of New York city, though retaining his interests in the rubber industry. Here he became an important member of many financial institutions, from which he was obliged latterly to withdraw, on account of his health. His rubber interests were transferred to his sons, J. Howard Ford and James Bishop Ford, who were respectively president and treasurer of the Meyer Rubber Co. at the time of its incorporation with the United States Rubber Co., in 1892. Both have since been directors of the United States company, of which James B. Ford is vice-president.

Mr. Ford owned a great deal of real estate, in New York and in New Brunswick. He was, at the time of his death, a director of the Home Insurance Co. He had been a member of the Union League Club since 1863, the year of its organization, having been one of the first one hundred members. He was a member also of the American Museum of Natural History and of the National Academy of Design, and attended the West Presbyterian church. He was married a second time to Miss Elizabeth Miller Horner, of New York, who died in 1895. Besides the two sons named above the surviving children include Mrs. Dr. Everett Herrick, of New York. The interment was at Woodlawn Cemetery, on December 2.

WILLIAM JAMES TYLER, for many years secretary of the India Rubber, Gutta Percha, and Telegraph Works Co., Limited (London and Silvertown), died during the last month, in his sixty-first year. He was appointed to the post referred to in 1871, and filled it with conspicuous advantage to all concerned to the day of his death. In 1872 the Cape of Good Hope colonies were agitating for telegraphic communication with the rest of the world, and Mr. Tyler was despatched by the Silvertown company to these colonies and to Mauritius, with a view to arranging for the establishment of a submarine telegraph system along the East African coast. The inertia of government departments often being great—owing to the unavoidable ignorance of those who deal with such matters—this mission brought no immediate result. However, the good seed sown at this period by Mr. Tyler, Mr. John Coles (representing Messrs. Hooper & Co.), and by the agents of the Telegraph Construction and Maintenance Co., bore fruit some seven years later in bring about the laying of the cables which now connect the Cape of Good Hope with Europe via Aden. These lines are the property of the Eastern and South African Telegraph Co. which has been a success from the day of its foundation, both as an investment and as an instrument of public utility. During Mr. Tyler's absence on the mission above alluded to, the endless worry attending work of this character laid him open to an attack of Mauritius fever, such as undermined his health for a considerable period.

\* \* \*

JOHN W. PRESCOTT, who died at his home in Dorchester, Mass., on October 7, had been connected with the India-rubber trade during most of his life, and was one of the founders of Prescott Bros., a firm now owned by Mr. William Keyes and still engaged in the mechanical-goods trade in Boston. Mr. Prescott was born in Newport, Me., about thirty-nine years ago and educated in the Boston public schools. He became well-known in business circles and was prominent in Masonic and other social organizations. About a year ago he retired from active business with a modest fortune and had since devoted his attention to his real-estate. Death was the result of heart disease.

## THE GUTTA PERCHA'S NEW FACTORY.

THE new factory of the Gutta Percha and Rubber Mfg. Co., Ltd., Toronto, has just been completed and the insurance men say that it is the best factory building in the city of Toronto. It is built on strictly modern lines, with steel columns and girders, asphalt floors, and is practically all windows, affording the best of light. It is fitted with the latest machinery necessary in the manufacture of rubber shoes, and so located that additional buildings can be erected when the growth of the business requires it. The company will make two grades of shoes. The first which will be high grade both in style and quality will be known as the "Maltese Cross," the second will be known as the "Lion" brand. The goods will be put up in attractive shape and will soon be on the market.

## RUBBER CAR SPRINGS.

A SAD commentary on a business that was once a large and profitable one in rubber is found in the few words devoted to rubber car springs in the *Car Builders' Directory*: "Rubber springs are now rarely used it is so difficult to secure a uniform quality of the article. They are in occasional use on platform safety chains for passenger equipment. In England they are used for draft and buffing."

## A TIRE-MAKING MACHINE.

THE illustration in connection with this shows a new type of pneumatic tire that is made wholly by machinery, and that has stood some remarkable tests. The machine on which this is manufactured is somewhat like one for making garden hose, except that instead of using fabric a series of threads are wound upon the mandrel. To begin at the beginning of the process, the mandrel in the machine is covered with the inner tube of the tire. One hundred and fifty bobbins, on which are either silk or cotton threads, are so arranged that these threads are wound down the length of the mandrel and around it to the further end, when, by a reciprocating motion, another ply of the same thread is run back at right angles to the first. These threads, before they have reached the surface of the inner tube, are coated with rubber cement. The second ply having been



laid in place, an automatic arrangement brings the tire-cover down upon the thread covered inner tube, rolls it into place, the mandrel is removed, and the tire spliced and cured. One machine can turn out 200 pairs of tires in ten hours. This invention, by the way, is covered by two patents, and three more applications are now in, as a further protection.

Two of the finished tires were recently tested at the department of mechanical tests at the Watertown Arsenal in Massachusetts, one of them standing 315 pounds pressure to the square inch, and the other 322 pounds pressure before they gave way. This tire is said to be marvelously resilient as well as strong, and large orders have already been placed for it. It is manufactured by the owners of the patents, the Consolidated Rubber Works, 116 Bedford street, Boston.

## A NEW RUBBER STORE.

ON December 15, 1896, or thereabouts, the New York Belting & Packing Co., Ltd., will, under its own name and management, open a large store or warehouse in Chicago. It has leased the five story building Nos. 143 145 Lake street, and will carry a complete stock of rubber goods and mill supplies. It is the intention to make this store the point from which the company's goods will be distributed throughout the West and Northwest. By the new arrangement the company will be brought into closer relations with its western customers, and will offer them for the first time its complete line of mechanical rubber goods. Hereafter orders will be filled with a promptness and care hitherto impossible. For fifty years the company has been making high grade goods, and during all that time its brands have stood so invariably for fine material and conscientious workmanship that they have become standards in their respective lines. The quantity and variety of the Chicago stock will be found as noticeable as its quality.

## THE JOSEPH BANIGAN RUBBER CO.

ARTICLES of incorporation have been filed under the laws of Rhode Island, of the Joseph Banigan Rubber Co., to operate the rubber-shoe factory the erection of which, at Olneyville, R. I., has been noted from time to time in THE INDIA RUBBER WORLD. The capital stock is \$1,000,000. The board of directors consists of Joseph Banigan (president), John J. Banigan (vice-president), Walter S. Ballou (secretary), William B. Banigan, and Edward R. Rice. The factory is expected to be in operation early in January with a capacity of 10,000 to 12,000 pairs of shoes and 2000 to 4000 pairs of boots daily. The company will be in a position to enter actively into the competition for trade at the beginning of the new rubber-shoe year.

Edward R. Rice, for some years past engaged in the rubber-shoe trade in Buffalo, handling the Woonsocket line, has sold out to F. C. Howlett, of that city, for the purpose of becoming actively connected with the sale of the new Banigan line of goods.

## RUBBER-TREE SEEDS WANTED IN BURMA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have a large coffee plantation in British Burma, and the question of profitable shade is one which I find hard to solve. I have been told that *Castilloa elastica* fills the bill. Is this so? Can you tell me where I can procure the seed? I wish to take back a quantity of this seed with me.

I have quite a few *Manihot glaziovii* trees, but would like more seed. I have been warned against importing seed from Ceylon, owing to the danger to my coffee from "leaf disease."

U. P. C.

Huntington, Mass., November 20, 1896.

[ABOUT three years ago we published some correspondence from Mr. F. O. Harriman, an American engineer who had settled at Jaltipan, Tehuantepec, Mexico, recounting his success in planting coffee and India-rubber (*Castilloa elastica*) in combination. The rubber trees had supplied a satisfactory shade, and, at the age of ten years, seemed ready for tapping. Whether the same good results would follow in British Burma would depend no doubt upon the climate and upon the altitude above sea-level. Just now a considerable degree of interest is being manifested by both coffee-planters and banana-planters in Nicaragua, where the *Castilloa elastica* is indigenous, in the subject of making plantations of this tree in connection with the other crops named. One gentleman interested in rubber-planting is Mr. J. N. Garrison, Bluefields, Nicaragua, who has spent a number of years there and has now a number of cultivated rubber trees old enough for tapping. We have his consent to refer to him any request for seeds of the *Castilloa elastica*. As for the *Manihot glaziovii* (the Ceará rubber), we cannot be so definite. Doubtless a letter addressed to any of the leading India-rubber houses at Pará, Brazil, mentioned so often in THE INDIA RUBBER WORLD, would elicit some information on how to procure seeds of the Ceará rubber tree.—THE EDITOR.]

A NEW plan for netting fish which is the invention of a Frenchman is what is known as an electrical fish net. It consists of a net of cylindrical shape with lead sinkers fixed to it in the ordinary way, while the upper edge consists of a rubber tube which is connected with the shore by another tube. The fish having been baited directly above the net, air is pumped into the rubber tube, the net slowly rises to the surface and the fish are caught.



## TRADE AND PERSONAL NOTES.

**M**R. R. A. LEIGH, superintendent of the Consolidated Rubber Works, during the recent test of the Kangarootires at the Watertown Arsenal, was so much interested in the matter that he crowded close to the machine, and finally when one of the tires burst at a pressure of 322 pounds to the square inch, his new suit of clothes was so covered with oil as to render it absolutely useless for further wear. The test, however, was so satisfactory that he doesn't grieve over the loss at all.

=The huge pneumatic tired tricycle of the Boston Woven Hose and Rubber Co. was recently run from Boston to Brockton, a distance of 25 miles, and thence from Brockton to Concord, N. H., 125 miles.

=The American Steam Packing Co. (Boston) have moved from their old quarters on Kilby street, to a fine store at 60 Federal street. Here they have ample room both for office use and for carrying a complete stock of their goods.

=Mr. J. C. McIntire, who travels for the Columbia Rubber Co. (Boston), was a recent caller at the office of THE INDIA RUBBER WORLD, his business taking him into New York State.

=Mr. W. H. Chadwick, who for many years was with C. S. Knowles, is scoring a decided success for Mr. W. M. Farwell, the Empire Rubber manufacturer, Boston.

=Mr. Henry F. Knowles, selling agent for the Globe Rubber Works (Boston), has returned from his southern trip fully recovered in health.

=The mackintosh manufacturers, in and about Boston, are exceedingly busy, the American Rubber Co. having orders that they cannot fill for weeks to come. The Standard Rubber Corporation have just added thirty-five new hands to their already large force, while the Conant Rubber Co., the W. H. Conant Gossamer Rubber Co., and the Apsley Rubber Co., are striving hard to fill the orders that are pouring in upon them.

=Mr. W. B. Dowse, of the Metropolitan Rubber Co. (Wallingford, Conn.), is quite ill, having caught cold during a recent hunting trip.

=The Peoria Rubber and Mfg. Co., Peoria, Ill., are sending out a very startling poster entitled, "What are the wild waves saying?" Such of the masculine element as enjoy seeing a spoony couple wading bare-legged in the surf, should send for it to adorn the walls of their offices.

=Mr. H. E. Wagoner, President of the Monarch Rubber Co., St. Louis, has just returned home after a two weeks' visit among the rubber manufacturers in New York and Boston. During this visit he placed some very substantial orders, indicative of his belief in the prosperity era now at our door.

=The report that the Boston Belting Company had closed down for an indefinite period, industriously circulated by the Boston dailies, was due to a confusion of names, the Roxbury Carpet Co. being perhaps the concern meant. The Boston Belting Co. are running full time, with orders in sight that indicate an unusually large business for the coming season.

=The Plymouth Rubber Co. has been incorporated in Massachusetts, with a capital of \$10,000. The new company take the factory of the Marron Mfg. Co., and will shortly erect an addition to it that will about double its producing capacity. The officers are P. F. Marron, Prest., A. Suydam, Treas., A. Cohen, Secy. The name of the Marron Mfg. Co. will also be used as a trade name along with the company's corporate name.

=Mr. J. Francis Hayward, Treas. of the Cable Rubber Co. (Boston), is again on a business trip through the West.

=Mr. E. H. Garcin, treasurer of the Trenton Rubber Co. (Trenton, N. J.), has just returned from Chicago, where he has opened a branch house for the distribution of his goods. The new store is located at 53 South Canal street.

=The New York store of the Boston Woven Hose and Rubber Co. (89 Reade street), which Mr. H. F. Hering opened last season for the distribution of Vim tires, is now stocked with a full line of mechanical rubber goods, which are being pushed with the same energy and success as the tires.

=On December 1st the enterprising firm of W. D. Allen & Co., 151 Lake street, Chicago, announced that they had become the general western distributing agents of the Manhattan Rubber Mfg. Co. of New York. This new connection will undoubtedly be pleasant and profitable for both of these wide-awake concerns.

=Mr. Willis A. Darling, sales agent of the Boston Woven Hose and Rubber Co. (Boston), is on a long business trip through the south and west, going as far as the Pacific coast. He expects to be back in Boston about the fifteenth of the month.

=The Boston Rubber Shoe Co. are testing on their heater-cars something that will be a decided innovation in that line. This is nothing less than a roller bearing for each truck. According to the concern who supply them, The Ball Bearing Co., one man can easily handle one of these cars, where without the bearings it would require three or more.

=Mr. W. M. Farwell, New England agent for the Empire Rubber Mfg. Co., kept open house at his office on the night of the election, receiving some three hundred telegrams as the returns came in, and treating his friends to a very appetizing little lunch.

=Speaking of the election, it is but just that Mr. F. L. Nagel of the *Textile Record* should have a word of appreciation from the organ of the rubber trade, for the reason that he acted as drill master for the Boston rubber division during the great parade on the Saturday previous to election. In appreciation of this, the rubber men presented him with a handsome meerschau pipe adorned with a Knights' Templar insignia, and a fine cut glass tobacco jar.

=The Winthrop Co. (Boston, Mass.), who have made quite a record as manufacturers of high grade rubber substitutes, were sufferers from the recent cyclone in Georgia. It will be remembered they have a plant near Savannah where were manufactured their products from cotton seed oil. The storm wrecked their buildings so that a new plant will have to be erected. This will be up in the course of a month, the work being pushed night and day that they may fill orders that are now waiting.

=Rubber shoes branded "Sussex Rubber Co." are being shipped by Wallace, Elliott & Co., the New York shoe-jobbers, but they are not the product of the new corporation by this name in connection with which the firm have been mentioned. The brand "Sussex Rubber Co." was formerly used by the New Brunswick Rubber Co. and it is understood that, when they closed out their stock bearing this brand, Wallace, Elliott & Co. became the purchasers. The president of the newly-incorporated Sussex Rubber Co., by the way, informs THE INDIA RUBBER WORLD that the company are yet only in a formative stage.

=The firm of Forcheimer & Co. (Mobile, Alabama) have for some time been importing Chiclé, and have lately gone into Central American rubber.

=A very neat advertising novelty and one that will be warmly welcomed by every wheelman, is a little package of chewing gum the cover of which effectively sets forth the merits of the League tires manufactured by the New York Belting and Packing Co., New York.

=The rubber-tire factory of the Spaulding & Pepper Co. (Chicopee Falls, Mass.) was closed on October 23 for an indefinite period, on account, as was stated, of the general stagnation in business. The employes were instructed to report for work on the morning after the election, in the case of McKinley's success, but otherwise to wait until sent for. The firm were reported to have on hand some large orders conditioned on the election of McKinley.

=The Ames, Holden Co., who are selling agents for the Granby Rubber Co. (Montreal), have established a depôt and warehouse at St. John, N. B., and it is reported that this, with their Toronto, Winnipeg, Vancouver, and Montreal branches, will be incorporated under one company with a capital of \$800,000, which will make it the largest shoe corporation in Canada. Their travelers are busy, and for the fall sorting-up trade they are carrying some new lines of Granby rubbers for spring wear, to suit the new toes and lasts. The offices and sample-rooms of the Ames, Holden Co. and the Granby Rubber Co., occupying the same building on Victoria square, Montreal, have lately been renovated and handsomely refurnished.

=The factory of the E. Read Goodridge Manufacturing Co. (Newport, R. I.), despite reports to the contrary, has not changed hands since its purchase at sheriff's sale, on July 10, by Daniel Le Roy Dresser, a New York commission merchant who had made large advances on goods consigned to him. The factory has been closed during the summer, and Mr. Dresser is still looking for a purchaser for it. Meanwhile the manufactured stock—elastic goods—also bought by Mr. Dresser, has been gradually removed from the factory and sold. In the hope that the Newport mill will be operated again before long, Mr. Dresser has not taken any other line of elastic goods. He is, however, selling agent for the combs made by the Goodyear Vulcanite Co.

=In addition to their trade in solid rubber tires, the Batavia Carriage Wheel Co. (Batavia, N. Y.) have become prepared to equip carriage-wheels with pneumatic tires, and are reported to be doing a good business. The Shortsville Wheel Co. (Shortsville, N. Y.) are also advertising vehicle-wheels fitted with rubber tires.

=The Rubber Step Manufacturing Co. (Exeter, N. H.) report that their business has trebled in volume since their removal, some three years ago, from Boston. They now have customers in Great Britain, throughout the European continent, and in Australia.

=Reasoner Brothers, proprietors of the Royal Palm Nurseries (Oneco, Fla.), speak in the strongest terms against the over-drawn stories that are going the rounds of the daily press with regard to the possibility for rubber gathering in Florida. They claim that the story emanated from a crank who came down there and saw three or four wild rubber trees, and with genuine sincerity they say they hope the foolish idea may soon die out.

=Victor Bernstein was arrested last month at Bath, Me., where he was conducting a sale of cheap rubber clothing, on the charge of selling goods without a license. He stated that he was in the employ of the Rosenthal Rubber Co., of No. 26 Parmenter street, Boston, which company, he claimed, had a state license. That document not being in evidence, however, Bernstein was fined \$50 and costs. The practice of the agents of this firm is to go from town to town, leasing a store for a

month and to advertise prices for waterproof clothing so low as to arouse the resentment of local merchants. In consequence they have been in trouble more than once before on the charge above mentioned. They were at Bangor, Me., not long ago, advertising goods at "twenty-five cents on the dollar."

=The Ribbed Tire Mfg. Co. is the name of a new concern which occupies the spacious lofts of the North Shore Lumber Co., Beverly, Mass., where they will manufacture non-puncturable bicycle tires, cotton and linen fire hose, etc. The company is under the management of Mr. J. F. Preston, formerly with the Cornelius Callahan Co., Boston.

=A. L. Comstock, superintendent for many years past of the American Rubber Co. (Cambridgeport, Mass.), was appointed in July last assistant to Emmet A. Saunders, general manager and general superintendent of the United States Rubber Co., to have special supervision of the mills at Cambridgeport, Bristol, Woonsocket, and Millville. Mr. Comstock has now been made general superintendent of all the United States Company's factories, leaving Mr. Saunders free to devote his time to the work belonging more specifically to the position of general manager.

=Mr. A. Sydemann, Treas. of the Plymouth Rubber Co. (Stoughton, Mass.) during a recent visit to New York purchased the whole machinery equipment of the Elizabeth Rubber & Novelty Co., at Elizabeth, N. J. It has been removed to Stoughton where it will at once be put in use.

=A recent letter from the senior partner of the rubber house of W. D. Walsh & Co., St. Louis, contains the following interesting note: "We noticed in your last issue, reference to the rubber jobbers' sound money parades in Boston and New York, before election, but you failed to say anything about the biggest parade in the whole lot, and that was in St. Louis on Oct. 31st, and had, by official figures, 104,847 men in line. There are twelve rubber jobbing concerns in St. Louis and eleven of them took part in the parade, turning out about 150 men, with a handsome banner and transparencies whose inscriptions were very pertinent. Mr. A. W. Day of the Day Rubber Co. was elected President of this organization, and W. D. Walsh, Secretary."

=Johnson, Moody & Co., of Boston, on November 19 sold at auction 15,000 cases of rubber shoes, on account of the Boston Rubber Shoe Co. The attendance was good, with good prices paid. One report states that even "the seconds and imperfect quality lots of stylish lines brought more as a rule than lots of perfect goods that were out of style." Auctioneer F. H. Nazro closed out 795 lots in five hours and a quarter.

=The rubber works at Setauket, L. I., have been running extra time, and the companies have advertised lately for more hands—something very unusual at this season. An attachment has been secured in Kings county against the Liberty Rubber Shoe Co. for \$4000, for alleged non-fulfillment of a contract to supply Henry Elliott & Co. with 4000 arctics for the United States government.

=W. A. McGraw & Co., jobbers of the Boston Rubber Shoe lines at Detroit, Mich., have opened a Chicago branch in the Lees building.

=The Standard Rubber Tire Co. have been incorporated at Trenton, N. J., by William H. Skirm, J. C. Snyder, and R. H. Ingersoll. The capital stock is \$10,000.

=The Easthampton Rubber Thread Co. (Easthampton, Mass.), after running only three days in the week for some time, began running full during the past month. The force has not been reduced at any time during the year.

=Charles A. Coe & Co., Boston rubber jobbers, will remove at the beginning of the new year from Nos. 168-170 Congress street to larger quarters at No. 117 Pearl street.

=The true story of Rainbow Packing, one that many will be interested to read, appears in print for the first time in the magnificent colored insert of the Peerless Rubber Mfg. Co., pages xxiii to xxvi.

=The Franklin Rubber Co. (Boston) recently gave the employees of their factory at Melrose, Mass., a leap-year party that was a grand success. There were about sixty couples present, the floor director being Mrs. Chadwick one of the coat makers. Music was furnished by the Maplewood orchestra.

=Work has been commenced at Bristol, R. I., on the foundation for a new rubber factory, to be located on Catherine street. The capitalization mentioned is \$25,000, and the concern will manufacture mackintoshes.

=The rubber-reclaiming works of the Woonsocket Rubber Co., at Millville, and those of the National India Rubber Co., at Bristol, are to be removed to Naugatuck, Conn., as soon as the stocks of material on hand have been ground up. This is another step toward the concentration of plants, in the interest of economical management, by the United States Rubber Co.

=There is great activity in the rubber industry at Akron, Ohio. There has been an increase of working forces in the factories of the B. F. Goodrich Co., the Diamond Rubber Co., and the Akron India Rubber Co., all of which are expected soon to be running with full forces and on full time.

=The Goodyear's Metallic Rubber Shoe Co. (Naugatuck, Conn.) are reported to have begun work on an addition to their factory, rendered necessary by the continued receipt of good orders.

=In response to a question as to the effect of the competition of the new Banigan rubber-shoe factory, an official of the Woonsocket Rubber Co. is quoted as saying: "You must remember this country is growing, and there is room enough for all. The unsettled condition of affairs was responsible for a great deal of the past dullness."

=At the December meeting of the board of aldermen of Woonsocket, R. I., the question is to come up for discussion whether the exemption from taxation of the Woonsocket Rubber Co. and the American Wringer Co. should be continued. The plant of the former is assessed at \$432,700 this year, but for some years past all over \$100,000 has been exempt from taxation. The American Wringer Co. ask for exemption from taxation on improvements costing \$41,500.

=Channing F. Meek, president of the American Ball Nozzle Co. (New York), on November 21 made an individual assignment to Wilbur C. Brown, without preferences. It is asserted that the company named will not be affected.

=A recent number of the *Wheel* contains an excellent portrait and an interesting sketch of Mr. H. F. Hering, the New York manager of the Boston Woven Hose & Rubber Co.

=Mr. Bengt R. Tilgren, of Newark, N. J., who is employed by a well-known manufacturer of high grade leather shoes, has just brought out a new rubber cushion heel which is said to be both durable and comfortable.

=The Tyer Rubber Co. (Andover, Mass.) are doing quite a business in footballs which they are now manufacturing in large quantities.

=Mr. S. H. C. Miner, Prest. of the Granby Rubber Co. (Granby, Quebec) visited the United States at election time as he was much interested in the result, but has now returned to Canada wholly satisfied.

=Henry F. Knowles, 111 Congress street (Boston) is covering New England with a very highly colored and artistic blotting pad, which not only advertises the Globe Rubber Works, but also the Eureka Fire Hose Co., and the Selden's Patent Steam Packing.

=The 300 employes of the Sandy Hook (Newtown, Conn.) factory of the New York Belting and Packing Co., Limited, were paid their wages in gold on November 11, the pay-roll amounting to about \$10,000.

=Mr. S. Y. L'Hommedieu, who is now manager of the Eastern Rubber Mfg. Co., has opened an office at 102 Chambers street, New York.

=Mr. F. A. Winchell, who was formerly manager of the New York Belting & Packing Co., has taken a western agency for the L. C. Chase Tough Tread Tires, his headquarters being Chicago and is doing an excellent business in marketing them.

=A recent number of the *Wheel* contains a very fine picture of Mr. Anton C. Eggers, Prest. of the Ideal Rubber Co., Brooklyn, with a sketch of the company's specialties and progress.

=Mr. W. J. Kelly, Mgr. of the Newton Rubber Works (Newton Upper Falls, Mass.), has just been elected to membership of the Knickerbocker Athletic Club, New York.

=It is always a matter of interest to those in the rubber shoe business to know where a new concern is to get its lasts, as for some time past there has been practically a last trust. Geo. Watkinson & Co., of Philadelphia, were able however to get their lasts manufactured by the Philadelphia Last & Pattern Co., who have given them excellent designs.

=Mr. Wm. P. Hayes, formerly secretary of the Trenton Rubber Co., Trenton, N. J., has accepted a position as steward of the Insane Asylum at Trenton.

=The Clingtight sandal, which is C. J. Bailey's latest invention, is already getting a remarkable hold on the market, large orders for it having already been placed.

=It is reported that a large firm manufacturing pneumatic tires for bicycles in the United States are about to build a manufactory near Paris where they will do the same sort of manufacturing for the French market.

#### CANADIAN NOTES.

THE Granby Rubber Co. (Granby, Quebec) not only manufacture their own box shoos but have recently put in machines for making cartons in which to pack their rubber footwear.

=The Rubber Manufacturers Association of Canada, have notified the Dominion government that they intend to send a deputation which will appear before them to discuss the question of duties and of exporting rubber goods.

=Mr. J. H. Walker, manager of the agency of the Canadian Rubber Co., in Toronto, after a number of weeks illness has returned to his post and is again actively engaged in business, and better than that is in good health.

=The annual sale of the Canadian Rubber Co. took place recently in Montreal. The goods brought high prices in spite of the fact that they were all seconds. Some 5000 cases were sold. About the same time the Toronto Rubber Co., of Toronto, held their annual sale, the prices on their goods being some fifteen per cent. higher than they were last year.

=The Gutta-percha & Rubber Mfg. Co., of Toronto, are hard at work on their rubber shoe factory. The company propose to manufacture a full line of rubber footwear.

#### VULCANIZING RUBBER WITH GUNPOWDER.

MR. ALLEN MAGOWAN, of the Trenton Rubber Co., who is one of the oldest rubber superintendents in the country, in speaking of the attempts to find a substitute for sulphur during the life of the Goodyear patents, relates the following experience. It seems that he had tried almost every substance that he could think of that was any way likely to vulcanize rubber and among other things gunpowder. This he



mixed in a wet state with white lead, oxide of zinc, and whiting. When dry he compounded rubber with it, and was able to effect a very satisfactory cure. His use of this material received a decided set back however through the unforeseen action of his thrifty wife. It seems that he made the gunpowder mixture at home, and unthinkingly left a parcel of the dried compound in the kitchen. Mrs. Magowan, in the process of putting things to rights, saw it, and full of the aversion that all good housewives have for things that soil, opened the stove and threw it into the fire. A second later the top of the stove was blown off, coals and ashes were scattered about the room, and the innocent cause of the trouble, although unhurt was frightened nearly out of her wits. That ended the experiments with gunpowder as a vulcanizer.

### APROPOS OF MCKINLEY.

MR. GEO. P. WHITMORE, of the Boston Belting Co., tells with great gusto the following incident which was an English happening. A gentleman named Marlow, attending an art auction had a valuable painting knocked down to him. The auctioneer asked his name, and he, not wishing to give it in so motley an assembly, replied "McKinley." This resulted in cheers from all present, one enthusiastic witness crying out at the top of his voice, "Let Mr. McKinley have the painting for nothing." Mr. Whitmore's informant, an intelligent Englishman, said: "Really I believe we feel as cheerful over the result of the election in our country as you do yourselves."

## REVIEW OF THE INDIA RUBBER MARKET.

THE increasing activity in all lines of industry in the United States, resulting from the reestablishment of confidence which is so essential to every form of business prosperity, has been witnessed in the India-rubber trade in satisfactory measure. It is understood, of course, that the India-rubber trade is by no means a thing apart, but that it depends more or less for an outlet upon almost every other interest. Consequently, until there has been a more marked improvement in the condition of the railways, for example, the orders from railway purchasing-agents will continue to be limited to the shortest possible requirements. And so with many other lines. But for some time past the boot-and-shoe industry has been unusually active, there has been more than a fair demand for mechanical rubber goods, and the season is well on for the manufacture of tires. Altogether, then, the industrial situation is such—combined with the feeling of confidence as to the future—as to stimulate the buying of crude rubber by manufacturers.

During the period which has elapsed since our last publication there have been some fluctuations in the price of India-rubber in New York, but at the last moment at which it is possible to survey the market before going to press, the prices at which sales are actually being made do not vary widely from previous quotations.

It will be seen that Pará quotations are higher, but this is due in part to an increase in the rate of exchange amounting to  $\frac{2}{11}$ .

Centrals are well sold out, on which account prices are well maintained.

In regard to the financial situation, Albert B. Beers, broker in India-rubber and commercial paper (No. 58 William street, New York), advises us as follows: "Since the election, banks have resumed buying commercial paper, including the rubber line. At first, during the early part of November, rates for prime single-name and double-name paper ruled at about  $6\frac{1}{2}$  @  $7\frac{1}{2}$  per cent., but have gradually declined with the easier money market to  $4\frac{1}{2}$  @  $5\frac{1}{2}$  per cent., and there is now quite a fair demand, the best paper being readily taken, and also something being done in names not so well known, but considered good."

#### PRICES FOR NOVEMBER.

|                      | 1895.  | 1895. | 1896.  |
|----------------------|--------|-------|--------|
| Upriver fine .....   | 83@84½ | 77@83 | 71 @73 |
| Upriver coarse ..... | 56@57  | 57@61 | 55½@57 |
| Island fine.....     | 81@83  | 74@81 | 68½@70 |
| Island coarse.....   | 47@48  | 44@51 | 47 @48 |
| Cameta coarse.....   | 51@52½ | 48@53 | 52 @53 |

The latest quotations in the New York market are:

| PARÁ.                       |       |       |  |
|-----------------------------|-------|-------|--|
| Islands, fine, new....      | 82    | @82½  |  |
| Islands, fine, old....      | none  | here  |  |
| Islands, coarse, new..      | 47    | @47½  |  |
| Islands, coarse, old...     | none  | here  |  |
| Upriver, fine, new...       | 84    | @85   |  |
| Upriver, fine, old....      | 88    | @90   |  |
| Upriver, coarse, new..      | 55½   | @56   |  |
| Upriver, coarse, old..      | none  | here  |  |
| Caucho (Peruvian) sheet     | 42½   | @43   |  |
| Caucho (Peruvian) strip     | 44½   | @45   |  |
| Caucho (Peruvian) ball      | 50    | @51   |  |
| CENTRALS.                   |       |       |  |
| Esmeralda, sausage..        | 51    | @52   |  |
| Guayaquil, strip....        | 35    | @41   |  |
| Nicaragua, scrap ....       | 49    | @51   |  |
| Nicaragua, sheet....        | none  | here  |  |
| Mangabeira, sheet....       | 40    | @42   |  |
| AFRICAN.                    |       |       |  |
| Thimbles.....               | 33½   | @35   |  |
| Tongues.....                | 38    | @39   |  |
| Sierra Leone.....           | 25    | @52   |  |
| Benguela.....               | 49    | @50   |  |
| Congo Ball.....             | 39    | @42   |  |
| Cameroon Ball .....         | 38    | @39   |  |
| Flake and Lumps....         | 24    | @25   |  |
| Accra Flake.....            | 18    | @20   |  |
| Accra Buttons.....          | 47    | @49   |  |
| Accra Strips.....           | 51    | @54   |  |
| Lagos Buttons.....          | 42    | @43   |  |
| Lagos Strips.....           | 42    | @43   |  |
| Liberian Flake.....         | 30    | @31   |  |
| Madagascar, pinky...        | 58    | @60   |  |
| Madagascar, black...        | 42    | @44   |  |
| Mozambique, red ball. ....  | ..... | ..... |  |
| Mozambique, white ball .... | ..... | ..... |  |
| EAST INDIAN.                |       |       |  |
| Assam.....                  | 42    | @56   |  |
| Borneo.....                 | 26    | @38   |  |
| GUTTA-PERCHA.               |       |       |  |
| Fine grade.....             | 1.30  |       |  |
| Medium.....                 | 1.00  |       |  |
| Hard white.....             | 85    |       |  |
| Lower sorts .....           | ..... |       |  |
| Balata .....                | ..... |       |  |

Late Pará cables quote:

|                         | Per Kilo. |                       | Per Kilo. |
|-------------------------|-----------|-----------------------|-----------|
| Islands, fine.....      | 7 \$200   | Upriver, fine.....    | 7 \$900   |
| Islands, coarse.....    | 3 \$200   | Upriver, coarse ..... | 4 \$700   |
| Exchange $8\frac{1}{4}$ |           |                       |           |

## THE ANTWERP RUBBER MARKET.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since our last report (dated October 23), the Antwerp rubber market has presented no features of special interest. The demand has not been very active, but prices have kept their own, and finest qualities have even slightly improved in value.

Sales amount to only about 22 tons, including:

7 tons fine red Kassai, at 7.12½ francs per kilogram.  
7½ tons black secondary Kassai, at 5.05 @ 5.20 francs.  
3½ tons Upper Congo Busera, at 6.27½ francs.

The arrivals have been 206,140 kilograms by the steamer *Leopoldville* and 196,313 kilograms by the *Edward Boklen*, against 78,918 and 70,096 kilograms respectively by the corresponding steamer arrivals last year. The total arrivals for the month aggregate 885,397 pounds.

Among recent arrivals have been included about 31½ tons Uellé (of which 9 tons sold previous to arrival); 78 tons Equateur; 14 tons Upper Congo balls; 37½ tons thimbles (sold previous to arrival); 27½ tons Mongalla; 5½ tons Bumba; 2½ tons Arruwimi; and 50 tons Lopori. About 61 tons will be offered at auction on November 28. We estimate to-day's total stock to be about 26½ tons.

C. SCHMID & CO.

Antwerp, November 21, 1896.

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilograms:

|  | Fine and Medium. | Coarse. | Totals. | Totals. | Totals. |
|--|------------------|---------|---------|---------|---------|
|  |                  |         | 1895.   | 1894.   |         |
| Stock, October 31.....                       | 255              | 120 =   | 375     | 211     | 864     |
| Arrivals, November.....                      | 585              | 325 =   | 910     | 1085    | 1097    |
| Aggregating.....                             | 840              | 445 =   | 1285    | 1296    | 1961    |
| Deliveries, November.....                    | 602              | 339 =   | 941     | 1063    | 1020    |
| Stock, November 30....                       | 238              | 106 =   | 344     | 233     | 941     |
|  |                  |         | 1896.   | 1895.   | 1894.   |
| Stock in England, November 30.....           |                  |         | 1140    | 358     | 660     |
| Deliveries in England, November.....         |                  |         | 850     | 775     | 625     |
| Pará receipts, November.....                 |                  |         | 2330    | 2300    | 2090    |
| Stock in Pará, November 30.....              |                  |         | 330     | 140     | 255     |
| World's supply Nov. 30 (excluding Caucho)... |                  |         | 2948    | 2484    | 3330    |
| Pará receipts since July 1.....              |                  |         | 8160    | 7680    | 7110    |

### IMPORTS FROM PARÁ.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

November 10.—By the steamer *Hilary*, from Pará:

|                         | Fine.   | Medium. | Coarse. | Caucho. | Total    |
|-------------------------|---------|---------|---------|---------|----------|
| Reimers & Meyer.....    | 101,700 | 21,200  | 70,700  | .....   | =193,600 |
| Lawrence Johnson & Co.. | 23,900  | 5,000   | 59,400  | .....   | = 88,300 |
| Sears & Co.....         | 56,400  | 7,100   | 23,600  | .....   | = 87,100 |
| New York Commercial Co. | 8,900   | 16,100  | 2,200   | .....   | = 27,200 |
| Shipton Green.....      | 8,000   | 1,100   | 1,000   | .....   | = 10,100 |
| Otto G. Mayer & Co..... | .....   | .....   | 9,000   | .....   | = 9,000  |
| P. Lima.....            | 2,400   | .....   | 2,200   | .....   | = 4,600  |
| Totals.....             | 192,400 | 43,300  | 182,000 | 2,200   | =419,900 |

November 20.—By the steamer *Origen*, from Manáos and Pará:

|                         |         |        |         |       |          |
|-------------------------|---------|--------|---------|-------|----------|
| Reimers & Meyer.....    | 123,900 | 28,700 | 94,900  | ..... | =247,500 |
| Sears & Co.....         | 118,900 | 24,900 | 33,300  | ..... | =177,100 |
| New York Commercial Co. | 70,300  | 13,900 | 17,600  | ..... | =101,800 |
| Lawrence Johnson & Co.  | 12,500  | 8,300  | 30,600  | ..... | = 51,400 |
| Kunhardt & Co.....      | 17,900  | 10,400 | 300     | ..... | = 28,600 |
| Shipton Green.....      | 15,400  | 3,600  | 3,500   | 300   | = 22,800 |
| Otto G. Mayer & Co..... | .....   | .....  | 10,200  | ..... | = 10,200 |
| P. Lima.....            | 4,900   | .....  | 4,200   | ..... | = 9,100  |
| G. Amsinck & Co.....    | .....   | .....  | 300     | ..... | = 300    |
| Totals.....             | 363,800 | 89,800 | 194,900 | 300   | =648,800 |

### OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during November, 1896, of India-rubber from Mexico, Central America and South America, other than Pará grades, also arrivals at New York of African and East Indian sorts:

#### CENTRALS.

|  | POUNDS. |
|--|---------|
| Nov. 1.—By the <i>Finance</i> =Colon:  |         |
| A. Santos & Co.....                    | 12,000  |
| J. Menendez & Co.....                  | 7,900   |
| Herzel, Feltman & Co.....              | 4,107   |
| Dumarest & Co.....                     | 3,437   |
| Roldan & Van Sickle.....               | 2,981   |
| Samper & Jimenez.....                  | 2,150   |
| Frame, Alston & Co.....                | 2,026   |
| W. R. Grace & Co.....                  | 1,200   |
| G. Amsinck & Co.....                   | 702     |
| D. A. De Lima & Co.....                | 500     |
| A. N. Rotholz.....                     | 500     |
| H. Marquardt & Co.....                 | 500     |
| J. Agostini.....                       | 61      |
| Total.....                             | 38,364  |
| Nov. 2.—By the <i>Carib</i> =Truxillo: |         |
| Eggers & Heinlein.....                 | 3,500   |
| J. Agostini.....                       | 2,500   |
| A. Lehman & Co.....                    | 1,000   |
| K. Mandell & Co.....                   | 400     |
| Total.....                             | 7,400   |

Nov. 4.—By the *Ardander*=Greytown:

|                       |        |
|-----------------------|--------|
| Andreas & Co.....     | 6,600  |
| A. P. Strout.....     | 3,500  |
| Munoz & Esprilla..... | 2,000  |
| Punderford & Co.....  | 200    |
| Total.....            | 11,700 |

Nov. 9.—By the *El Rio*=New Orleans:

|  |       |
|--|-------|
| Albert T. Morse.....                       | 4,000 |
| Nov. 4.—By the <i>Hudson</i> =New Orleans: |       |
| Gillespie Brothers.....                    | 3,000 |
| A. T. Morse.....                           | 3,000 |
| Total.....                                 | 6,000 |

Nov. 11.—By the *Orizaba*=Mexico:

|                         |       |
|-------------------------|-------|
| E. Stelger & Co.....    | 1,000 |
| H. Marquardt & Co.....  | 700   |
| Joseph Ware.....        | 600   |
| H. A. Forrest & Co..... | 200   |
| J. Agostini.....        | 200   |
| Thebaud Brothers.....   | 200   |
| Total.....              | 2,900 |

Nov. 12.—By the *Valencia*=Colon:

|                          |        |
|--------------------------|--------|
| F. Int. Eddy & Co.....   | 2,904  |
| Piza, Nephews & Co.....  | 2,273  |
| G. Amsinck & Co.....     | 2,061  |
| A. P. Strout.....        | 1,840  |
| Munoz & Esprilla.....    | 1,662  |
| G. R. Cottrell & Co..... | 1,528  |
| A. M. Capen's Sons.....  | 854    |
| Eggers & Heinlein.....   | 100    |
| Total.....               | 13,229 |

November 25.—By the steamer *Dona Maria*, from Manáos and Pará:

|                         |        |        |        |       |          |
|-------------------------|--------|--------|--------|-------|----------|
| Reimers & Meyer.....    | 28,000 | 10,700 | 9,000  | ..... | = 47,700 |
| Lawrence Johnson & Co.. | 15,000 | 7,900  | 6,000  | ..... | = 28,900 |
| New York Commercial Co. | 11,400 | 2,900  | 2,900  | ..... | = 17,200 |
| Hagemeyer & Brunn.....  | 12,100 | 1,100  | 2,900  | ..... | = 16,100 |
| Sears & Co.....         | 5,000  | 1,100  | 1,800  | ..... | = 7,900  |
| Totals.....             | 71,500 | 23,700 | 22,600 | ..... | =117,800 |

November 30.—By the steamer *Mananse*, from Pará:

|                         |         |        |         |       |          |
|-------------------------|---------|--------|---------|-------|----------|
| Reimers & Meyer.....    | 146,000 | 32,500 | 92,500  | ..... | =271,000 |
| New York Commercial Co. | 126,700 | 22,800 | 65,900  | 6,300 | =221,700 |
| Lawrence Johnson & Co.. | 44,300  | 6,400  | 31,600  | 200   | = 82,500 |
| Sears & Co.....         | 13,600  | 2,500  | 4,800   | ..... | = 20,900 |
| P. Lima.....            | 6,200   | .....  | 4,600   | ..... | = 10,800 |
| Sgal & Co.....          | .....   | .....  | 4,200   | ..... | = 4,200  |
| Totals.....             | 336,800 | 64,200 | 203,600 | 6,500 | =611,100 |

|                                | 1896.     | 1895.     |
|--------------------------------|-----------|-----------|
| January Imports from Pará..... | 2,718,300 | 2,869,500 |
| February Imports.....          | 1,945,900 | 2,274,400 |
| March Imports.....             | 2,786,300 | 3,611,700 |
| April Imports.....             | 1,941,500 | 2,156,400 |
| May Imports.....               | 1,527,800 | 1,651,400 |
| June Imports.....              | 583,900   | 1,030,100 |
| July Imports.....              | 727,000   | 666,200   |
| August Imports.....            | 872,500   | 766,500   |
| September Imports.....         | 896,900   | 1,335,900 |
| October Imports.....           | 1,671,200 | 1,523,700 |
| November Imports.....          | 1,797,600 | .....     |

#### PARA RUBBER VIA EUROPE.

November 6.—By the steamer *Britannic*, from Liverpool:

|                               |        |
|-------------------------------|--------|
| Reimers & Meyer (coarse)..... | 16,700 |
|-------------------------------|--------|

November 14.—By the steamer *Lucania*, from Liverpool:

|                               |        |
|-------------------------------|--------|
| Reimers & Meyer (coarse)..... | 12,000 |
| Sgal & Co. (coarse).....      | 500    |

November 23.—By the steamer *Etruria*, from Liverpool:

|                               |        |
|-------------------------------|--------|
| Reimers & Meyer (coarse)..... | 55,000 |
| Sgal & Co. (coarse).....      | 7,000  |

November 28.—By the steamer *Campania*, from Liverpool:

|                                     |        |
|-------------------------------------|--------|
| Reimers & Meyer (fine).....         | 70,000 |
| George A. Alden & Co. (coarse)..... | 18,600 |
| George A. Alden & Co. (caucho)..... | 27,000 |
| Sgal & Co. (coarse).....            | 7,000  |

November 30.—By the steamer *La Bretagne*, from Havre:

|                                     |        |
|-------------------------------------|--------|
| George A. Alden & Co. (caucho)..... | 15,500 |
|-------------------------------------|--------|

Nov. 12.—By the *Ville de St. Navarre*=Cartagena:

|                      |       |
|----------------------|-------|
| G. Amsinck & Co..... | 1,200 |
|----------------------|-------|

Nov. 17.—By the *Ardanrose*=Greytown:

|                    |       |
|--------------------|-------|
| A. P. Strout.....  | 5,500 |
| Andreas & Co.....  | 1,700 |
| Ellinger Bros..... | 800   |
| A. N. Rotholz..... | 1,000 |
| Total.....         | 9,000 |

Nov. 18.—By the *Alleghany*=Cartagena:

|                         |       |
|-------------------------|-------|
| D. A. De Lima & Co..... | 2,000 |
| Punderford & Co.....    | 1,500 |
| Flint, Eddy & Co.....   | 300   |
| H. Marquardt & Co.....  | 200   |
| Total.....              | 4,000 |

Nov. 17.—By the *Mashelyne*=Pernambuco:

|                        |       |
|------------------------|-------|
| Allerton D. Hitch..... | 2,160 |
|------------------------|-------|

Nov. 21.—By the *Advance*=Colon:

|                           |        |
|---------------------------|--------|
| Hirzel, Feltman & Co..... | 11,176 |
| G. Amsinck & Co.....      | 5,896  |
| Roldan & Van Sickle.....  | 4,830  |
| W. R. Grace & Co.....     | 3,039  |
| Frame, Alston & Co.....   | 2,800  |
| Dumarest & Co.....        | 2,770  |
| A. Santos & Co.....       | 1,805  |
| R. F. Cornwell.....       | 1,000  |
| Flint, Eddy & Co.....     | 837    |
| G. R. Cottrell & Co.....  | 243    |
| R. S. Beston & Co.....    | 243    |
| Total.....                | 36,753 |

Nov. 23.—By the *Galileo*=Bahia:

|                      |        |
|----------------------|--------|
| Reimers & Meyer..... | 17,000 |
|----------------------|--------|

|   |         |
|---|---------|
| Nov. 25.—By the <i>Silvia</i> =Truxillo :           |         |
| Eggers & Heinlein.....                              | 2,500   |
| A. Lehman & Co.....                                 | 700     |
| Hoadley & Co.....                                   | 700     |
| Total.....  | 3,900   |
| Nov. 25.—By the <i>City of Washington</i> =Mexico : |         |
| E. N. Tibbals.....                                  | 1,500   |
| H. Marquardt & Co.....                              | 1,000   |
| Thebaud Bros.....                                   | 200     |
| Total.....  | 2,700   |
| Nov. 28.—By the <i>St. Paul</i> =Southampton :      |         |
| George A. Alden & Co.....                           | 2,200   |
| Nov. 30.—By the <i>Chalmette</i> =New Orleans :     |         |
| A. T. Morse.....                                    | 10,000  |
| W. H. Crossman & Bro.....                           | 7,500   |
| Total.....  | 17,500  |
| Nov. 30.—By the <i>Loulatana</i> =New Orleans :     |         |
| A. T. Morse.....                                    | 2,800   |
| Nov. 30.—By the <i>Manacoe</i> =Maranham :          |         |
| G. Amsinek & Co.....                                | 600     |
| Reimers & Meyer.....                                | 500     |
| Total.....  | 1,100   |
| Total Centrals for November.....                    |         |
| Total for October.....                              | 183,839 |
| Total for September.....                            | 185,393 |
| Total for August.....                               | 116,215 |
| Total for July.....                                 | 331,344 |
| Total for June.....                                 | 154,987 |
| Total for May.....                                  | 260,926 |
| Total for April.....                                | 175,511 |
| Total for March.....                                | 107,924 |
| Total for February.....                             | 297,762 |
| Total for January.....                              | 339,937 |

## AFRICANS.

|  |         |
|--|---------|
| Nov. 6.—By the <i>Britannic</i> =Liverpool : |         |
| Sgal & Co.....                               | 11,300  |
| Nov. 7.—By the <i>Umbria</i> =Liverpool :    |         |
| George A. Alden & Co.....                    | 100,200 |
| Sgal & Co.....                               | 1,900   |
| Total.....                                   | 111,100 |
| Nov. 12.—By the <i>Majestic</i> =Liverpool : |         |
| William A. Brown & Co.....                   | 3,500   |
| Nov. 13.—By the <i>Persia</i> =Hamburg :     |         |
| Reimers & Meyer.....                         | 24,700  |
| Albert T. Morse.....                         | 8,900   |
| Total.....                                   | 33,600  |
| Nov. 14.—By the <i>Lucania</i> =Liverpool :  |         |
| George A. Alden & Co.....                    | 24,900  |
| Reimers & Meyer.....                         | 20,500  |
| A. T. Morse.....                             | 11,100  |
| Sgal & Co.....                               | 700     |
| Total.....                                   | 57,200  |
| Nov. 14.—By the <i>Maraca</i> =Hamburg :     |         |
| George A. Alden & Co.....                    | 10,000  |

|  |         |
|--|---------|
| Nov. 20.—By the <i>Germanic</i> =Liverpool :   |         |
| Otto G. Mayer & Co.....                        | 5,600   |
| Nov. 20.—By the <i>Peninsular</i> =Lisbon :    |         |
| George A. Alden & Co.....                      | 75,000  |
| Reimers & Meyer.....                           | 40,100  |
| Total.....                                     | 115,100 |
| Nov. 23.—By the <i>Etruria</i> =Liverpool :    |         |
| Reimers & Meyer.....                           | 38,000  |
| O. G. Mayer & Co.....                          | 16,700  |
| Sgal & Co.....                                 | 13,000  |
| Total.....                                     | 67,700  |
| Nov. 25.—By the <i>Bohemia</i> =Hamburg :      |         |
| Reimers & Meyer.....                           | 32,000  |
| Albert T. Morse.....                           | 700     |
| Total.....                                     | 32,700  |
| Nov. 25.—By the <i>Westernland</i> =Antwerp :  |         |
| Reimers & Meyer.....                           | 55,000  |
| Nov. 25.—By the <i>Teutonic</i> =Liverpool :   |         |
| George A. Alden & Co.....                      | 11,000  |
| Nov. 27.—By the <i>Massachusetts</i> =London : |         |
| Reimers & Meyer.....                           | 11,000  |
| Nov. 28.—By the <i>Campania</i> =Liverpool :   |         |
| Reimers & Meyer.....                           | 35,800  |
| George A. Alden & Co.....                      | 11,500  |
| Sgal & Co.....                                 | 15,100  |
| Total.....                                     | 62,400  |
| Nov. 28.—By the <i>St. Paul</i> =Southampton : |         |
| Reimers & Meyer.....                           | 4,000   |
| Total Africans for November.....               |         |
| Total for October.....                         | 588,200 |
| Total for September.....                       | 49,300  |
| Total for August.....                          | 168,600 |
| Total for July.....                            | 234,300 |
| Total for June.....                            | 393,300 |
| Total for May.....                             | 693,800 |
| Total for April.....                           | 315,300 |
| Total for March.....                           | 775,100 |
| Total for February.....                        | 316,300 |
| Total for January.....                         | 424,900 |

## EAST INDIAN.

|  |         |
|--|---------|
| Nov. 17.—By the <i>Irton</i> =Singapore :      |         |
| Reimers & Meyer (Pontianak).....               | 56,000  |
| Nov. 20.—By the <i>Megantic</i> =London :      |         |
| Reimers & Meyer.....                           | 3,900   |
| Nov. 28.—By the <i>St. Paul</i> =Southampton : |         |
| Reimers & Meyer.....                           | 20,000  |
| Nov. 30.—By the <i>Armenia</i> =Hamburg :      |         |
| Robert Soltan & Co.....                        | 1,300   |
| Total East Indian for November.....            |         |
| Total for October.....                         | 81,200  |
| Total for September.....                       | 12,500  |
| Total for August.....                          | 171,800 |
| Total for July.....                            | 418,300 |
| Total for June.....                            | 63,800  |
| Total for January.....                         | 130,900 |

|                         |         |
|-------------------------|---------|
| Total for May.....      | 576,500 |
| Total for April.....    | 522,400 |
| Total for March.....    | 310,100 |
| Total for February..... | 285,900 |
| Total for January.....  | 315,400 |

## RECAPITULATION.

|                                     |           |
|-------------------------------------|-----------|
| Pará-direct imports.....            |           |
| Pará-via Europe.....                | 1,787,600 |
| Centrals.....                       | 229,300   |
| Africans.....                       | 183,839   |
| East Indian.....                    | 588,200   |
| Total at New York for November..... | 2,880,139 |
| Total for October.....              | 2,463,162 |
| Total for September.....            | 1,976,893 |
| Total for August.....               | 1,659,815 |
| Total for July.....                 | 1,306,244 |
| Total for June.....                 | 1,280,587 |
| Total for May.....                  | 3,171,736 |
| Total for April.....                | 3,271,311 |
| Total for March.....                | 4,192,324 |
| Total for February.....             | 2,840,862 |
| Total for January.....              | 2,823,537 |

## BOSTON ARRIVALS.

|   |         |
|---|---------|
| Nov. 3.—By the <i>Roman</i> =Liverpool :    |         |
| George A. Alden & Co.—East Indian.....      | 890     |
| Nov. 6.—By the <i>Borderer</i> =Liverpool : |         |
| Reimers & Meyer—Africans.....               | 13,000  |
| Nov. 10.—By the <i>Kansas</i> =Liverpool :  |         |
| Sgal & Co.—Africans.....                    | 6,000   |
| Sgal & Co.—Parás.....                       | 300     |
| Nov. 23.—By the <i>Galileo</i> =London :    |         |
| Reimers & Meyer—Africans.....               | 3,000   |
| Nov. 25.—By the <i>Paronia</i> =Liverpool : |         |
| Reimers & Meyer—Africans.....               | 6,500   |
| Nov. 25.—By the <i>Ottoman</i> =Liverpool : |         |
| Sgal & Co.—Parás.....                       | 1,050   |
| Sgal & Co.—Africans.....                    | 4,000   |
| George A. Alden & Co.—Parás.....            | 23,750  |
| Nov. 27.—By the <i>Bostonian</i> =London :  |         |
| George A. Alden & Co.—East Indian.....      | 24,800  |
| Total at Boston for November.....           |         |
| Total for October.....                      | 93,000  |
| Total for September.....                    | 79,600  |
| Total for August.....                       | 45,800  |
| Total for July.....                         | 7,000   |
| Total for June.....                         | 419,180 |
| Total for May.....                          | 35,770  |
| Total for April.....                        | 69,890  |
| Total for March.....                        | 122,050 |
| Total for February.....                     | 200,001 |
| Total for January.....                      | 210,000 |
| Total for November.....                     | 72,800  |

## NEW ORLEANS.

|                |                |
|----------------|----------------|
| NOVEMBER.      |                |
| POUNDS. VALUE. |                |
| Nicaragua..... | 18,102 \$7,603 |

## OCTOBER EXPORTS OF INDIA-RUBBER FROM PARA.

From "A Provincia do Pará."

[NOTE.—The figures denote weights in Kilograms.]

| EXPORTERS.                          | UNITED STATES. |         |         |         |           | EUROPE. |         |         |         |         | TOTAL.    |
|-------------------------------------|----------------|---------|---------|---------|-----------|---------|---------|---------|---------|---------|-----------|
|                                     | FINE.          | MEDIUM. | COARSE. | CAUCHO. | TOTAL.    | FINE.   | MEDIUM. | COARSE. | CAUCHO. | TOTAL.  |           |
| Pusinelli, Pfitze & Co.....         | 198,858        | 45,901  | 33,936  | 11,024  | 290,719   | 139,786 | 22,289  | 86,403  | —       | 248,478 | 539,197   |
| Adelbert H. Alden.....              | 89,327         | 12,025  | 43,111  | —       | 144,463   | 55,160  | 15,130  | 30,300  | 3,722   | 104,312 | 248,775   |
| R. F. Sears & Co.....               | 9,920          | 970     | —       | —       | 10,890    | 138,550 | 17,680  | 58,600  | —       | 214,830 | 225,720   |
| Rud. Zietz.....                     | 145,560        | 14,924  | 21,177  | —       | 181,661   | —       | —       | 17,900  | —       | 17,900  | 199,561   |
| La Roque da Costa & Co.....         | 92,480         | 11,390  | 56,100  | —       | 159,970   | 10,880  | 3,060   | 23,100  | —       | 37,040  | 197,010   |
| Denis Crouan & Co.....              | 23,746         | 5,780   | 3,780   | —       | 33,306    | —       | —       | —       | —       | —       | 33,306    |
| Singlehurst, Brocklehurst & Co..... | 22,127         | 3,060   | 4,957   | —       | 30,144    | —       | —       | —       | —       | —       | 30,144    |
| Pires, Teixeira & Co.....           | 1,020          | —       | —       | —       | 1,020     | 4,630   | —       | 3,940   | —       | 8,570   | 9,590     |
| Edmund Reeks.....                   | —              | —       | —       | —       | —         | 3,811   | 510     | 518     | —       | 4,839   | 4,839     |
| Sundry small shippers.....          | 10,110         | —       | 8,870   | —       | 18,980    | 1,190   | —       | 20,700  | —       | 21,890  | 40,870    |
| From Manáos, direct.....            | 230,797        | 65,192  | 57,927  | 30,185  | 384,101   | 79,396  | 20,552  | 20,858  | 1,558   | 122,364 | 506,465   |
| Total.....                          | 824,945        | 159,242 | 229,858 | 41,209  | 1,255,254 | 433,403 | 79,221  | 262,319 | 5,280   | 780,223 | 2,035,477 |
| Total for September.....            | 623,303        | 134,616 | 206,244 | 107,886 | 1,072,139 | 336,074 | 67,303  | 178,755 | 10,393  | 592,525 | 1,664,664 |
| Total for August.....               | 131,233        | 27,205  | 111,077 | 40,462  | 310,517   | 505,308 | 86,583  | 209,855 | 49,956  | 851,702 | 1,162,219 |



